

VOLUME IV - A.M. Session

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF NEW YORK

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CORNELL UNIVERSITY, a non-profit
New York corporation, and CORNELL
RESEARCH FOUNDATION, INC., a non-
profit New York Corporation,

Plaintiffs,

vs.

01-CV-1974

HEWLETT-PACKARD COMPANY, a
Delaware corporation,

Defendant.

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HEWLETT-PACKARD COMPANY, a
Delaware corporation,

Counterclaimant,

vs.

CORNELL UNIVERSITY, a non-profit
New York corporation, and CORNELL
RESEARCH FOUNDATION, INC., a non-
profit New York corporation,

Counterdefendants.

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Transcript of a Jury Trial held on May 23,
2008, at the James Hanley Federal Building,
100 South Clinton Street, Syracuse, New York,
the HONORABLE RANDALL R. RADER, United States
Circuit Judge, Presiding.

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1 (Court convenes at 8:10.)

2 THE COURT: Mr. Anderson, do you have anything
3 more for me this morning?

4 MR. ANDERSON: Yes, Your Honor, a few things I
5 would like to discuss before you continue your discussion
6 with Dr. Stewart.

7 First, a little context on the variations of
8 calculations related to the different levels of product,
9 processor, CPU, systems that are at issue in this case. We
10 can pull up an overview. Now, Dr. Stewart has conducted
11 analysis to determine what is the revenue from
12 Hewlett-Packard sale of systems that contain PA-8000 family
13 processors, and he came out with this \$36 billion
14 calculation. He also came out with an adjusted figure based
15 on certain critiques that Mr. Wallace, an accountant that HP
16 has retained in this case, came up with for \$34 billion,
17 still systems tied to PA-8000 processors.

18 Mr. Wallace went through a few calculations to
19 determine average selling price for CPUs and processors based
20 on, in part, the OEM sales data that was available, based in
21 part on the express database that was available, based in
22 part on standard costs information that was available, and
23 the calculations that he came out with for the CPU were
24 \$23 billion.

25 THE COURT: The CPU being the --

1 MR. ANDERSON: The larger unit with the
2 processor and on-board cache. I don't think it's the entire
3 brick.

4 MR. ALLCOCK: It is, Your Honor.

5 THE COURT: Is it the entire brick?

6 MR. ALLCOCK: It's the entire brick. It's not
7 just -- the term has been used loosely in this court, and I
8 even used in opening for the CPU to be the chip and the heat
9 sinks associated.

10 MR. CUNNINGHAM: Your Honor, this is the cell
11 board for one of the servers. The brick goes right here.
12 There are four bricks across this plane right here, about
13 this size, that's what that is.

14 THE COURT: The brick is what the CPU is, or
15 the entire unit that you're holding up, Mr. Cunningham?

16 MR. ALLCOCK: The unit in the cell board.

17 MR. CUNNINGHAM: This is the cell board, the
18 unit is the CPU, it's got a fan in it.

19 MR. ALLCOCK: Although, Your Honor another way
20 of using the term CPU is inside the brick, there are the
21 processor on a board, a tiny board, with a couple of heat
22 sinks and that is also used to be processors, but in
23 Wallace's analysis and in the ordering and configuration
24 guides, the term CPU is used in a looser fashion to mean the
25 brick.

1 THE COURT: Thank you. Mr. Anderson.

2 MR. ANDERSON: So, we have with that
3 explanation the CPU brick valued at 23 billion. So, we can
4 see that it is for that brick two-thirds of the revenue is
5 attributable to the bricks out of that entire system.
6 Mr. Wallace also did calculations to get down to the
7 processor, and he did one where he was looking at the CPU
8 ratio, information that he was able to derive from the OEM
9 sales, and came up with a figure in a little excess of
10 \$8 billion. And another, he looked at a standard cost ratio,
11 and came up with a figure of nearly \$6 billion.

12 So, in all these cases we can see that as we
13 cut the product down from what's sold to each component, the
14 components have substantial value. We're talking about a
15 large amount of revenue, however you slice it.

16 A second issue is, the Court asked him
17 questions yesterday about allocations, and I thought it would
18 be particularly instructive to go back to Plaintiffs' Exhibit
19 Plaintiffs' 440, this was design sign-off. The Court may
20 recall this was a document --

21 THE COURT: Can I ask a question,
22 Mr. Anderson? Are you and Dr. Stewart then proposing to base
23 your ultimate estimates on something less than the whole
24 system?

25 MR. ANDERSON: What we would be prepared to

1 do, Your Honor, Dr. Stewart has looked through Mr. Wallace
2 analysis, what we would be prepared to do is while he doesn't
3 agree necessarily that they are the appropriate selective
4 figures, that these are different computations that of the
5 different components that you can find in the system, and
6 applying a royalty rate to those, we come out with a set of
7 different choices that the jury could go forward in its
8 selection of damages in this case.

9 THE COURT: Thank you, Mr. Anderson, that will
10 be helpful as we move forward here.

11 MR. ANDERSON: So, as I was mentioning, Your
12 Honor, the design sign-off objective, the document says,
13 dynamic scheduling adds complexity but will soon become a
14 competitive requirement. We've seen that. What we didn't
15 explicitly see is further back in the document, I don't know
16 if you can get to this Mr. Hoy, but it's Exhibit P-440, and
17 if you'll go to HP 052534, the document talks about certain
18 assumptions that will be the case with the launch of the
19 PA-8000 family of processors. 52534.

20 If we can do the final two bullets. One
21 assumption that Hewlett-Packard was working under when it was
22 talking about out-of-order being a competitive requirement
23 was that the system would go out without -- the PA-8000 would
24 be an upgrade to an existing system and that there would be
25 no new systems or major redesigns, no significant I/O

1 systems, I/O driver impact. Another assumption is that there
2 would be no major software value added at the PA-8000 launch.
3 This can also be seen in some of the documents that
4 Hewlett-Packard introduced and some of the testimony that
5 Hewlett-Packard presented, that customers in configuring
6 their systems had a menu. That menu existed at the interface
7 between the PA-7000/PA-8000 transition and at the
8 PA-8000/Itanium transition, where they could select one or
9 the other architectures as the foundation for their system,
10 and they would pay a price differential. If they were price
11 sensitive, they would have and could have selected the
12 PA-7000 and saved money.

13 If HP was having customers wanting to continue
14 to buy PA-7000 at a lower price because they didn't believe
15 that the advantages of the PA-8000 were sufficient --

16 THE COURT: Well, if the price changes
17 significantly, you probably entered a different market,
18 haven't you?

19 MR. ANDERSON: Well, it depends on how you
20 talk about the market, Your Honor.

21 THE COURT: That's exactly the question we
22 have before us, what is the market.

23 MR. ANDERSON: And one of the things that
24 Dr. Stewart has looked at --

25 THE COURT: I think Dr. Stewart will tell us

1 one of the finest indicators of the market is the price.

2 MR. ANDERSON: Well, what you have here --

3 THE COURT: It's the one thing that
4 dissimilates all and digests all of the market available
5 information down to a single indicator, shall I say.

6 MR. ANDERSON: We've introduced documents from
7 HP on describing markets for the systems. HP tends to
8 differentiate between low, middle and high-end, but the
9 systems, that we got from the testimony of Mr. Gustafson
10 where he went through the various classes of workstations, he
11 described what the various demands of the customers were on a
12 performance basis and associated that with the processor that
13 was in that system. We went through the A, B, C, J, et
14 cetera. What you have in the order configuration guide is
15 the ability to pick a system that is exactly the same
16 throughout all of the menu choices with the option to toggle
17 between processors.

18 THE COURT: Can I ask you a few questions,
19 Mr. Anderson, just to clarify my thinking?

20 Is it my understanding that you are proffering
21 an alternative course of testimony for Dr. Stewart which will
22 take into account more that the claimed invention is only a
23 component of the entire system and, therefore, you would be
24 ready to present evidence other than on the entire system as
25 the royalty base?

1 MR. ANDERSON: We would be, based on
2 Dr. Stewart's --

3 THE COURT: That's a yes or no.

4 MR. ANDERSON: Yes.

5 THE COURT: Thank you. Can I ask Mr. Allcock
6 at this point if he -- what he proposes at this point and if
7 you're going to have any motions for me.

8 MR. ALLCOCK: Well, yes, Your Honor. Well,
9 here's the way -- as you might imagine, I thought about this
10 a little last night. Here's the way we see it. All they
11 have shown in the trial record -- I'm going to come back to
12 this point at the end. All they have shown in the trial
13 record is that performance is a factor. They have not even
14 shown that the patented invention is the sole basis or even
15 the basis for the performance, even on a chip or a brick
16 level. But putting that aside, I'm going to come back to it,
17 there is no dispute, it's not controverted, it's
18 uncontrovertible, that on the system level there are multiple
19 and obvious other factors that drive the performance,
20 software, service --

21 THE COURT: We just got some of these things.
22 Can you proceed to what you propose?

23 MR. ALLCOCK: Well, Your Honor, that gets us
24 to the Rule 26 issue. This witness has never proffered
25 opinions on anything other than systems. He has repeatedly

1 affirmatively vigorously denied that any basis other than
2 systems is reasonable or possible. So on a Rule 26 basis --

3 THE COURT: I understand that Dr. Stewart is
4 able to give us testimony on something more than just on a
5 systems basis. Is that true, Dr. Stewart?

6 THE WITNESS: Yes, sir.

7 THE COURT: And I'm fully convinced of his
8 credentials and qualifications to do so.

9 MR. ALLCOCK: So I'll move pass the Rule 26
10 issue, Your Honor. On the trial record issue, there is
11 nothing in the record that would support any basis for an
12 apportionment opinion on anything, but certainly not as to
13 the intermediate brick level.

14 I mean, the jury's been told what a brick is.
15 They don't even know what's in it. They don't even know how
16 it operates. They don't know anything about the brick.
17 That's the CPU on the gradation that counsel showed. The
18 only thing that's in the trial record is the processor, the
19 chip itself, that's all they know about.

20 THE COURT: They've been told repeatedly about
21 the brick. They've been told the processor is part of the
22 brick. I think they are aware that the brick is a component
23 and that it has the function of carrying at least the
24 processor and perhaps more. I don't think my jury is quite
25 as far removed from the facts as you seem to think,

1 Mr. Allcock.

2 MR. ALLCOCK: I agree with everything the
3 Court said, that they know what it is and they know what's in
4 it, but that they don't know all that it does or what
5 function it performs in the system other than holding the
6 processor and having some other stuff in it, that's all they
7 know. And on this record I don't think this witness is --
8 even assuming Rule 26 aside, and we can drop down to the next
9 level, I don't think the record is sufficient for this
10 witness to have an opinion on that point.

11 THE COURT: So your motion is?

12 MR. ALLCOCK: Our motion would be to block the
13 witness from any damage testimony completely because anything
14 other than testimony on the server would be a violation of
15 the Rule 26 requirements. We've deposed this gentleman
16 repeatedly. He has repeatedly said he can't and will not go
17 below that level, that's point one. Point two, if the Court
18 is to allow anything other than that, it should be on the
19 lowest level because he has no opinion, has never had an
20 opinion on anything in the middle level, and the only thing
21 the jury knows about is the processor level.

22 THE COURT: So your motion is to strike the
23 witness completely?

24 MR. ALLCOCK: Yes.

25 THE COURT: I have your motion. Thank you.

1 I'm going to proceed at this point as I will rule
2 Mr. Allcock's motion. I will grant it in part.

3 In *Daubert*, '93 Supreme Court case, the
4 Supreme Court set out an analytical framework for district
5 courts to determine admissibility of expert testimony. In
6 the time since, as we know, Congress has amended 702 to
7 comport with *Daubert* and further emphasize the trial Court's
8 gatekeeper role in this critical area.

9 Rule 703 provides, as we know, that the
10 testimony of an expert must be based upon sufficient facts or
11 data, testimony must be the product of reliable principles
12 and methods, and the witness must have applied those methods
13 and principles reliably to the facts of the case. So we're
14 talking here about methodology. We're talking about whether
15 the methods that are being proffered will adequately reflect
16 the value of the claimed invention.

17 This Court is charged with determining whether
18 Dr. Stewart's methodology will supply the jury with
19 sufficient evidentiary basis for its judgment on damages.
20 You also know the district court has broad discretion in
21 determining how to assess reliability and whether that
22 reliability exists. And that was established by the *Kumho*
23 *Tire* case.

24 The federal circuit has further made clear
25 that damages calculation, quote, "requires sound economic

1 proof of the nature of the market and likely outcomes with
2 infringement factored out of the economic picture," close
3 quote. That's the *Grain Processing* case, 1999. This maxim
4 applies in equal force to lost profits and reasonable royalty
5 analyses.

6 A reasonable royalty analysis, which
7 contemplates a hypothetical negotiation between a willing
8 patentee and willing licensee, necessarily involves some
9 approximation of the market as it would have hypothetically
10 developed absent infringement. This analysis, in turn,
11 requires sound economic and factual predicates. That's from
12 the *Riles versus Shell Exploration* case of the Federal
13 Circuit, citing the *Crystal Semiconductor* case of the Federal
14 Circuit.

15 This Court has conducted an inquiry and is not
16 convinced that economic, factual and methodological
17 predicates are present for establishing a reasonable royalty
18 based on the entire system value. And, therefore, the Court
19 will exercise its discretion to exclude proffered testimony
20 that makes the royalty base contingent on the entire system.

21 I would point out that this Court admonished
22 the parties that expert testimony on the topic of damages
23 wouldn't be allowed absent a firm basis in economic
24 principles and factual predicates during its May 6th pretrial
25 conference. And again we went through that again last night.

1 I think the problem here is that any
2 reasonable royalty analysis based upon the entire system
3 value is fundamentally flawed in method, in method used to
4 identify the royalty base and apportion value between the
5 patented inventions and the accused products does not take
6 into adequate account that the claimed invention is only a
7 component of a component of the system. Despite my repeated
8 exhortations that he connect this proposed royalty base to
9 the market and consumer demand, the methodology proffered
10 that looks at the entire system fails to account for that
11 apportionment problem.

12 Looking at it in a different term, we can also
13 look at this as an application of the entire market value
14 rule where we're seeking to claim the value of the entire
15 system based on an invention that affects only a component of
16 a component. Proof that that component of the component
17 drives sales of the entire system and is responsible solely
18 for the sales of the entire system would perhaps substantiate
19 an application of the entire market value rule.

20 The record evidence shows at best that
21 purchasers offer Hewlett-Packard servers due to superior
22 performance. And again there has been no record proof that
23 performance is solely attributable to the component of the
24 component. There are many factors which affect the
25 performance of the Hewlett-Packard machines. No effort has

1 been taken into account to link the entire performance or the
2 entire market value to the claimed invention.

3 A simplistic comparison of the accused
4 products to Hewlett-Packard's ramp up of sales of a second
5 system, the Itanium, or its ramp down of sales of the third
6 system, the 7000 series, tells little about the market or
7 demand for specific improvements provided by the patented
8 invention. They happened at different times under different
9 circumstances, there were market factors and beyond the
10 contemplation of the Court that affected all of those
11 circumstances.

12 The current proffered methodology does not
13 account for the difference in the marketing cost of
14 Hewlett-Packard's servers and processor modules. This Court
15 just at one point looked under the direction of one of the
16 witnesses, Mr. Cox, that the HP K class enterprise servers
17 were selling for over \$55,000. Additional processor modulars
18 for those servers were selling for \$14,000. That vast
19 difference in price suggests that there are different markets
20 and demands and suggests again that the processors, while a
21 component of the value of the entire system, are not the
22 entire value of that system.

23 Therefore, this Court's going to permit
24 Dr. Stewart to continue to testify, but he will not be
25 permitted to testify using the entire system as the royalty

1 base. I understand that he is prepared to testify on
2 something less that takes into account to some degree, based
3 on his expertise, the fact that the claimed invention is not
4 the entire system but only a component of a component of that
5 system.

6 So, are there any questions about the
7 parameters of my ruling at this point, Mr. Anderson?

8 MR. ANDERSON: Yes, Your Honor.

9 THE COURT: Let's make sure we have them
10 clarified and please consult with Dr. Stewart to any degree
11 you need to in that.

12 MR. ANDERSON: Certainly. One question is, is
13 since the component is used in a system --

14 THE COURT: Yes.

15 MR. ANDERSON: -- is the jury entitled to know
16 what the revenues were for the systems to have that in
17 context?

18 THE COURT: Yes, they can know in context the
19 value of the entire system.

20 MR. ANDERSON: Before we proceed --

21 THE COURT: But the testimony will clearly
22 factor out that you're, of course, seeking only compensation
23 for the value of the claimed invention.

24 MR. ANDERSON: Right.

25 THE COURT: And that that's a component of

1 this larger system. However Dr. Stewart takes that into
2 account, I will rely on his expertise to take that into
3 account, but he must do so.

4 MR. ANDERSON: As to the royalty rate that we
5 discussed yesterday on the issue of the royalty source, which
6 the Court held under its advisement clarification on that
7 issue, could be useful for purposes of going forward with the
8 opinion of Dr. Stewart.

9 THE COURT: I think that Dr. Stewart can apply
10 his expertise to pick that royalty rate and it seemed to me
11 that he was dealing with technology that is within the range
12 of methodological credibility and that he can offer his
13 opinion that those royalty rates would be the accurate ones
14 to apply. My jury can hear that evidence.

15 MR. ANDERSON: On a related issue, we have two
16 other experts in this matter, one a licensing expert,
17 Mr. Rappaport. His opinion is based on a licensing
18 professional's perspective on what in the hypothetical
19 negotiation and in the real world parties look at in
20 addressing the royalty base issue. And his opinion is in
21 hypothetical negotiation in this case the parties would have
22 fixed on the sale of the system as the royalty base and
23 adjusted the rate accordingly. So the question becomes
24 whether the Court's decision --

25 THE COURT: What do you mean by adjusted the

1 rate accordingly? They have adjusted it downward to account
2 for the fact that this is only a component of a component of
3 that system?

4 MR. ANDERSON: That's the gist of his
5 testimony.

6 THE COURT: If he testifies to that effect and
7 adjusts it downward looking at the value of the component to
8 the entire system, his testimony will be admissible.

9 MR. ANDERSON: He does not offer an
10 independent opinion on the royalty rate. He opines on
11 whether hypothetical and real world what the royalty base
12 would be and offers the additional opinion that the issue of
13 components would be adjusted in the royalty rate
14 determination, but does not come to an opinion on what that
15 royalty rate would be, depends on what Dr. Stewart is
16 offering on royalty rate. I want to be absolutely clear with
17 the Court where we intend to go so that we don't get into in
18 front of the jury and base --

19 THE COURT: Well, you've heard my ruling.
20 Make sure that he understands it, and that he understands
21 that the entire system is context but that we are looking for
22 a value short of that, which would be the contribution of the
23 claimed invention to that system.

24 MR. ANDERSON: Understood. We would request
25 an opportunity to at some juncture make an offer of proof on

1 the testimony we would have offered but for the Court's
2 *Daubert* ruling at this juncture.

3 THE COURT: That's very fair and preserves all
4 your rights, and you can make that proffer at any time, of
5 course not in the presence of the jury.

6 MR. ANDERSON: Absolutely.

7 THE COURT: So if you could do that this
8 evening or at any point.

9 MR. ANDERSON: We've also prepared a very
10 short bench brief on the issue that I hoped to get to the
11 Court before the ruling. I would like to submit it.

12 THE COURT: Please submit it. I will take it
13 into consideration.

14 MR. ANDERSON: One of the factors that we were
15 going to address with the Court is the issue of demand. The
16 Court will note, I think from our trial brief, that in this
17 case the issue of customer discovery was contentious, and as
18 a result of the contention on the customer discovery, certain
19 orders were entered into in this case. One I think was a
20 preclusion against HP from asserting that failure to produce
21 customer demand discovery, that is that HP's customers
22 demanded the patented feature, was not an impediment to our
23 proving our case.

24 That same order certified, report
25 recommendation certified HP for contempt on the issue. Judge

1 Mordue did not enter an order of contempt, finding that the
2 preclusion sanction on the customer demand issue was a
3 sufficient sanction for the failure to provide customer
4 discovery. So we also have issues related and orders related
5 to, I mentioned the discovery of Mr. Wiltschut on EIC data,
6 that was also related to an order of the court that found
7 that Hewlett-Packard had failed to produce materials within
8 its possession, Gardner and IEC and other trade information
9 sources, that would provide potentially further information
10 on demand issues. We have very little on that score.

11 So, this is in the context of this discovery,
12 and in the context of the legal framework we've been dealing
13 with in this case, which is a hypothetical negotiation, and
14 in an entire market value rule situation, neither of which
15 are economic --

16 THE COURT: We need to get to our jury. I'm
17 going to preserve for you all rights to make additional
18 arguments. I'm going to preserve the same rights to you,
19 Mr. Allcock, to support your motion, which the Court granted
20 in part.

21 MR. ANDERSON: And I know Your Honor wishes to
22 get started right away and I do, too. I could use a few
23 minutes to try to make adjustments because we didn't know
24 what the ruling was.

25 THE COURT: Certainly you're entitled to that.

1 Let me give you an additional assurance. If we need to come
2 back to Dr. Stewart next Tuesday after he has had a weekend
3 to consider things more and if he wants to supplement his
4 testimony at that time, the Court will proceed to
5 Mr. Allcock's case today leaving open the prospect of you
6 taking into account the Court's ruling today more fully and
7 then supplemental testimony later.

8 MR. ANDERSON: Thank you, Your Honor.

9 THE COURT: So you can close your case,
10 subject to our understanding that you have an opportunity to
11 supplement your case beyond just a rebuttal, if that's
12 suitable, Mr. Anderson.

13 MR. ANDERSON: Thank you, Your Honor.

14 THE COURT: Mr. Allcock, would you like to say
15 something?

16 MR. ALLCOCK: Just briefly, Your Honor. I
17 understand the Court's ruling, I understand that with respect
18 to Rule 26; however, implicit, I believe, in the Court's
19 ruling is that they're otherwise limited to the opinions that
20 they've previously have espoused in their expert discovery.
21 In other words, I don't know what he is going to say now, and
22 I don't want an upward adjustment in the royalty rate to come
23 at me in the middle of testimony that I've never heard
24 before. So I don't know. I mean, I can object as we go, I
25 guess, but --

1 THE COURT: You certainly can and your rights
2 will be protected all the way through and you'll have to do
3 that. And I will offer you the same offer I just made to
4 Mr. Anderson, that if you see things here that due to my
5 ruling today catch you by surprise, I'll give you ample time
6 to reconsider, supplement your testimony and readjust your
7 response so that your witnesses and your cross-examination
8 have full time for preparation.

9 MR. ALLCOCK: Thank you, Your Honor.

10 THE WITNESS: Your Honor?

11 THE COURT: Yes, Mr. Stewart.

12 THE WITNESS: If I could impose on you. I
13 want to make sure that I don't misspeak in a way that would
14 be at variance with your ruling today, so I want to make sure
15 on a couple of issues that I'm clear.

16 THE COURT: Please do.

17 THE WITNESS: Is it your ruling, therefore,
18 that I should not, for example, do the arithmetic of
19 multiplying the royalty base of 34 or \$36 billion depending
20 on assumptions by a royalty rate of two and a half percent.

21 THE COURT: Yes, that would not be
22 permissible. That is using what the Court has determined to
23 be an inappropriate methodology for setting the royalty base.

24 THE WITNESS: And I am clear and will be
25 careful not to do that. As you saw --

1 THE COURT: You could, based upon your
2 expertise here, you could choose something less than that
3 system based on the record as a royalty base to multiply your
4 rate by.

5 THE WITNESS: You anticipated my question. So
6 that, therefore, referring in our mind to the slide that
7 Mr. Anderson had put up, if I were to explain that, I believe
8 the jury has already heard me say, that there were reasons
9 why I believed systems were appropriate and, therefore, to
10 avoid confusion, I anticipate that I would explain that as we
11 go through the discussion of the royalty rate, that Cornell
12 is therefore seeking damages based on the application of that
13 royalty rate to a smaller royalty base and, for example, a
14 royalty base calculated by Mr. Wallace based on CPUs would be
15 \$23 billion, approximately. Would that be consistent with
16 your objective here?

17 THE COURT: It seems to me you can indicate --
18 yes, you could make that calculation and your reasons for it
19 and that would be acceptable. The methodology, as I have
20 tried to stress, would then be taking into account more the
21 actual dimensions of the claimed invention, so yes, you could
22 do that.

23 THE WITNESS: Thank you, Your Honor, for that
24 clarification. And I would second Mr. Anderson's request for
25 a few minutes to organize my thoughts on the presentation.

1 THE COURT: Please, if you want to go down and
2 talk with him, meet with him right there, that's appropriate,
3 as far as I'm concerned too. It's a little unusual in
4 procedure but --

5 MR. ANDERSON: Your Honor, if you want to
6 take -- I don't know in the Court would want to do this, but
7 take a short recess with Mr. Stewart's testimony, we do have
8 some video.

9 THE COURT: Let's do that. Let's bring them
10 in, we can go to a few of your video depositions.

11 MR. ANDERSON: I've been told that I can't do
12 what I'm doing and play the video at the same time.

13 THE COURT: We need another new invention.

14 MR. ANDERSON: So I'll move as quickly as we
15 possibly can.

16 THE COURT: Please do so.

17 (9:10, jury present.)

18 THE COURT: Ladies and gentlemen, one of your
19 fellow jurors asked a question: What is a court constructed
20 claim. We have seen several times the claims of the '115
21 patent. Those are the specific definitions of the scope of
22 the invention. The Court, namely me, I will be instructing
23 you about the meaning of those claims. I'll be instructing
24 you what those claims include and what they exclude. That
25 will come as a part of your jury instructions at the end of

1 the trial.

2 Occasionally, because I've already given those
3 instructions to the attorneys, they will both refer to the
4 Court's claim construction, which is just the Court's
5 explanation of the meaning of those claim words. So you'll
6 get all that later from me and you'll probably hear them
7 talking about that throughout the trial.

8 Now, I think we were hearing from Dr. Stewart,
9 and I think you were inquiring, Mr. Anderson, am I correct?

10 MR. ANDERSON: I was.

11 THE COURT: I apologize for the delay this
12 morning; we had some legal matters. You know, that's what we
13 all get paid for is these legal matters, so you have to
14 indulge us now and then. So, Mr. Anderson, I believe you
15 were inquiring.

16 MR. ANDERSON: Yes, Your Honor.

17 *CONTINUED DIRECT EXAMINATION BY MR. ANDERSON:*

18 Q If we could pull up a slide midway through the
19 presentation, that will get us to our starting spot.

20 Now, Dr. Stewart, you calculated -- have you
21 calculated information related to HP's profits and liquid
22 assets from 1996 to 2006?

23 A Yes, sir, I have.

24 Q Why have you done such calculations?

25 A The reason for choosing the period 1996 through

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1 2006 is because that's the period of the alleged
2 infringement. The first sale of a server or workstation that
3 is accused of infringement was in approximately August of
4 1996. The infringement, alleged infringement continues until
5 the patent expired in February of 2006. So for context, what
6 I have done here is simply calculate the total magnitude of
7 HP sales of servers and workstations that are accused of
8 infringement, that is the PA-8000 series, \$36 billion.

9 Later on when we talk about various economic
10 factors that in my opinion would affect the royalty rate
11 negotiations. Remember we were just about to get to a
12 discussion of royalty rate. I've tabulated the operating
13 profit margin on the product lines that include those accused
14 servers and workstations, about 26.25 percent, so that we can
15 see that the operating profit on those accused servers and
16 workstations in the box, about \$9.5 billion in total
17 operating profit.

18 And simply for context I have noted that HP's
19 profits from all of its sales during that not quite ten-year
20 period were \$35 billion, and not a profit figure but simply a
21 measure of cash, HP's cash and cash equivalent, like we would
22 have in a checking account or a money market fund, in October
23 of 2006 was \$16 billion.

24 Q Now, if we could turn to slide 16. I think we
25 discussed briefly with the jury yesterday. Would you please

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1 go over the considerations you have considered or the factors
2 you have considered in thinking about royalty base in this
3 case?

4 A Yes, sir. And just to review briefly what we were
5 saying at the end of the day yesterday, the question that I
6 was beginning to address was the issue whether the patented
7 invention substantially contributed to customer demand. And
8 I had indicated, I believe, I'm not sure if we got to that
9 point or not, that I concluded that the answer to that
10 question was yes, based on the numerous HP documents that
11 emphasize the importance of microprocessor performance, the
12 numerous HP documents that identify the link between
13 out-of-order execution and the superior performance of the
14 PA-8000 family of microprocessors, and tying that together
15 with Dr. Smith's testimony that it was Dr. Torng's invention
16 which made possible the superior performance of the
17 out-of-order processor.

18 Q If we could turn to the next slide. What are you
19 doing here, Dr. Stewart?

20 A This is just a summary slide that mentions a few of
21 the very large number of HP documents that emphasize the
22 importance of high performance.

23 Q Let's take a look at a few of these. If we could
24 go to the next slide. What was the significance of this
25 material to your analogy?

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1 A I'm going to go through these very quickly since
2 many of them have been talked about before. I think in each
3 case we can simply look at the highlighted section for what's
4 relevant in these documents, in this case the objective of HP
5 to maintain industry leading price performance for the
6 PA-RISC processors, platforms and technologies.

7 Q Look at the next slide.

8 A Once again a discussion of the importance of
9 performance leadership and in 1992, three years before the
10 PA-8000 workstations and servers are introduced into the
11 marketplace, the concern on the part of HP that IBM has
12 usually been ahead of HP.

13 Q Next slide.

14 A We've seen this before, the association of
15 out-of-order execution with what in a number of documents is
16 called dynamic scheduling, and the conclusion that dynamic
17 scheduling, while it has complexities, will soon become a
18 competitive requirement.

19 Q Next line.

20 A Another concern about IBM in 1993 prior to the
21 introduction of the PA-8000 series of workstations and
22 servers.

23 Q Next slide, please.

24 A 1993, HP still worried that they're not
25 competitive.

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1 Q Next slide.

2 A 1995, a few months before the accused servers and
3 workstations actually find their way into the market place.

4 Q A few months, you said?

5 A I misspoke if I said other than a few months. The
6 accused processors actually began to be sold in August of
7 1996, so a little more than a year, a discussion of the
8 magnitude of the investment necessary, and again references
9 to IBM and Sun in the context of performance.

10 Q Next slide, please.

11 A I think we began to talk about this document in a
12 slightly different context yesterday. This is later, but in
13 October 2000 still performance is regarded as extremely
14 important, and here is one of the few references that we have
15 in HP documents to some actual figures that may turn out to
16 be helpful to us in evaluating the differential value of
17 performance, an estimate that the commercial UNIX market
18 value is the range of a several billion dollars to HP, and
19 that a performance competitive advantage could result in up
20 to a billion dollars of incremental revenue each year.

21 Q So you talk about the emphasize on microprocessor
22 performance. Why are you also discussing the link between
23 out-of-order execution and the superior performance of the
24 microprocessor?

25 A Because this is what's necessary to tie the

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1 invention to the superior performance. We will see in the HP
2 documents, the clear link as HP sees it, the author of these
3 documents, between out-of-order execution and the superior
4 performance. The connection of course is what comes about as
5 a result of the assumption I make, that you will need to
6 decide at some point, if the conclusion is that HP has in
7 fact used Dr. Torng's patent, then the link is Dr. Torng's
8 patent enabling out-of-order execution, enabling the superior
9 performance in the marketplace.

10 Q So let's go to the next slide. What did you put
11 together here?

12 A Again, a small sampling, actually, although there
13 is a number here, that's a very small sampling of the number
14 of documents that talk about the connection between
15 out-of-order processing on performance. And because we've
16 got quite a few here, I would go like to go through them very
17 quickly.

18 Q Well, and I think that we can focus on a few here,
19 Dr. Stewart. Why don't we turn to slide 33. 32. What was
20 the significance of this Q and A in?

21 A We've seen this Q and A before. I can't remember
22 if yesterday or the day before we saw this actual question
23 and answer. The question is sort of a hypothetical question
24 for HP sales people to anticipate answering, I think, to a
25 customer or a potential customer, how much performance

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1 benefit does out-of-order execution yield. This is hard to
2 quantity, but our experience indicates that it is not
3 possible for a RISC processor to sustain four-way superscalar
4 operation without this feature.

5 Q Forty-one, please. Why are you looking at this
6 particular portion of the press release, April 3, 1996?

7 A A point we've seen before but important to keep in
8 mind that HP documents tend to use this terminology,
9 intelligent execution, in the context of out-of-order
10 execution.

11 Q If we can turn now to slide 44. Now, Dr. Stewart,
12 let's go back. I would like you to discuss this -- please
13 remove this slide, Mr. Hoy. Thank you.

14 In your report did you discuss the considerations
15 that you thought about in coming to and in your thinking on
16 what the appropriate royalty base should be in this matter?

17 A Yes, sir, I did.

18 Q Would you please explain to the jury some of the
19 things you considered in thinking about the royalty base in
20 this matter?

21 A Yes, sir. We've talked about some of those I think
22 just as we were finishing yesterday. But to review those,
23 there is the issue of how HP actually sold its servers and
24 workstations, or more generally how were the microprocessors
25 themselves, how did they end up in the hands of customers.

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1 And what we've heard on many occasions, I don't want to
2 belabor the point, is that HP sells servers and workstations,
3 there is a very small quantity, at most one and a half
4 percent, that may have been transferred in some other way.

5 Q Now, Dr. Stewart, did you start your consideration
6 of the issue with any focus on the servers and workstation
7 market?

8 A Well, I certainly did not start my analysis with
9 the presumption that server and workstation revenue would be
10 the appropriate rate base. And, in fact, when I wrote my
11 report now just about two years ago, as I went through the
12 analysis, I wrote explicitly that the right way to start the
13 intellectual exercise is to consider the smallest possible
14 measure of sales or any measure for a royalty base, and
15 conceptionally that would be the processor itself.

16 Q And why is that? Why would you focus on the
17 smallest sales component as a starting point for purposes of
18 your analysis?

19 A For two reasons, in my opinion, as an economist.
20 First, to think about going through the mental exercise of
21 what is the appropriate royalty base. And then secondly, in
22 order to look at what evidence there is, in this case
23 evidence from deposition testimony and from the HP documents,
24 as to that relate to the two topics that we talked about late
25 yesterday and summarized again today, A, how is the product

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1 sold, and B, is the patented invention substantially
2 responsible for demand for the overall servers and
3 workstations. But you can't just start with that as the way
4 to start out, at least that doesn't make economic sense from
5 my perspective. You need to work your way through a logical
6 train of thought that leads to a conclusion regarding an
7 appropriate royalty base.

8 Q So, in your methodology, is it accurate that you
9 would consider based on reasonable data sales of, for
10 example, CPUs as a royalty base?

11 A Certainly that would be an alternative candidate
12 for a measure of a royalty base.

13 Q And based on your discussion of looking for the
14 smallest base of revenue transactions to start your inquiry,
15 if there were actually revenue transactions connected to
16 processors, would that be something that you would consider
17 in your royalty base analysis?

18 A Yes, sir. And we'll talk about that in a few
19 minutes.

20 Q Now, I would like to turn to something we were just
21 starting our conversation yesterday, which was the
22 alternatives analysis that you had conducted, comparing and
23 contrasting the PA-8000, PA-7000 and Itanium. Could we
24 please turn to the next slide, 45? I think we looked at this
25 and discussed it at some point. Actually, let's go to slide

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1 40.

2 MR. ANDERSON: Your Honor, we would like to go
3 on with the discussion of the alternatives, including the
4 comparisons of relative revenue related to those alternatives
5 as a comparison between them, since HP has identified the
6 PA-7000 and Itanium as an alternative.

7 THE COURT: Okay.

8 MR. ANDERSON: Thank you.

9 Q Let's turn to slide 47. What have you done here,
10 Dr. Stewart?

11 A I have simply graphed the sales of servers and
12 workstations that incorporate the PA-8000 processor, that's
13 the blue line. You know, Mr. Anderson, I meant to bring a
14 laser pointer up here and I forgot.

15 Q I will attempt to find you one.

16 MR. ANDERSON: I'm sorry, Your Honor, may I
17 approach the witness?

18 THE COURT: Yes.

19 MR. ANDERSON: Thank you.

20 A This blue line simply tabulates sales of the
21 accused servers and workstations, the ones that incorporate
22 the PA-8000 family of microprocessors. I've compared that to
23 the sales of the PA-7000 family of microprocessors, that's
24 the earlier family that we learned used the in-order
25 processing. And here are the sales of the Itanium based

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1 workstations, the ones that were introduced in 2001.

2 Q What does this tell you with respect to your
3 analysis of alternatives, Dr. Stewart?

4 A It tells us several things, in my opinion. HP has
5 contended that both the PA-7000 and the Itanium would be
6 acceptable non-infringing alternatives to the accused PA-8000
7 base servers and workstations. We heard Dr. Smith talk
8 yesterday about his view that from a computer scientist's
9 point of view, he didn't think that was the case, and he
10 explained why. And I certainly can't add anything to that,
11 I'm not a computer scientist, I don't have the expertise to
12 say anything about that.

13 But from an economist's perspective, we can add
14 something to that, because we can see how the marketplace has
15 reacted to what HP contends are these alternatives. Here's
16 the PA-7000 series servers and workstations, and we see that
17 as the PA-8000 based workstations were introduced starting in
18 August of 1996, with what has been characterized in the
19 documents and in testimony as industry leading performance
20 characteristics, we see that the sales of the PA-7000 drop
21 rapidly. So, from an economist's perspective, this graph, I
22 think, tells us quite clearly that the PA-7000 would not be
23 regarded as an acceptable non-infringing substitute for the
24 workstations and servers incorporated in the PA-8000.

25 And similarly, for the Itanium. Although we have

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1 heard it characterized as a success, compared to the PA-8000,
2 we only have one, two, three, four, five years and a little
3 bit of fiscal 2006, so we've only got five years worth of
4 data for the Itanium, we don't know from --

5 Q Let me stop you for a moment, please, Dr. Stewart.
6 Now, Mr. Cox testified in this case that the Itanium
7 presently in the 1998, some twelve years or more after HP
8 introduced the PA-8000 family, has finally supplanted PA-8000
9 and has 80 percent of HP's market for high-end servers while
10 PA-8000 systems are only 20 percent. Does a fact that there
11 is that split tell you anything about where the revenue line
12 is, where that red line goes? Does that mean the red line
13 goes way up or that the blue line comes down, or what?

14 A Well, if what Mr. Cox was talking about were unit
15 sales, then it actually doesn't shed much light on the issue.
16 We know from the HP documents that the Itanium based servers
17 and workstations were money losers, not money makers, so we
18 don't know about the profitability. I don't know anything
19 independently about the sales since the last documents that
20 were provided by HP which go through only a few months into
21 their fiscal 2006 year.

22 Could we turn to the next chart, Mr. Anderson? We
23 have a little more information. I couldn't graph the 2006
24 data on that previous graph, it would be misleading, because
25 we've only got a portion of the data, and that's not fair.

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1 But we can compare the percentages and what we can see is
2 that for the portion of fiscal year of 2006, for which we had
3 data, the Itanium had grown to about 26 percent of HP sales
4 of servers and workstations and the PA-RISC, which by then
5 was entirely PA-8000, was about 74 percent.

6 Q This is based on percentage of overall revenue, is
7 that correct?

8 A That's correct.

9 Q Does it tell the jury whether the revenues are
10 increasing or decreasing over time?

11 A Well, we see that the revenue for --

12 Q No, I'm talking about not as a percentage but the
13 absolute amount. Let's go back to the prior graph.

14 So, if you combined in 2005 the blue line and the
15 red line, that would be HP's overall UNIX sales and
16 workstation sales?

17 A Yes, that's correct.

18 Q So, if those lines both stay flat or both go down,
19 but the blue lines go down at a faster pace than the red
20 line, the percentages will get closer, even though the market
21 share is shrinking, isn't that correct?

22 A That's right. Suppose just as I said, I don't know
23 the numbers after this portion of 2006, but suppose that by
24 2008 HP sales had gone from 200 to 100 overall but Itanium
25 sales were 80 percent, so they're 80 out of 100, as opposed

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1 to -- again, I'm just illustrating this -- as opposed to,
2 say, 15 or 20 percent of 200. Then the numbers aren't going
3 up in actual terms, they're just going in percentage terms,
4 and I simply don't know the answer to that since I haven't
5 seen anything after 2006.

6 Q Have you been provided with any information in the
7 productions that you have seen that indicates that Itanium
8 based systems became a success, where their sales rapidly
9 increased as we see, for example, in the blue line with the
10 PA-8000 based systems?

11 A Not in the documents that HP provided in this
12 litigation. All we can do is look at the data that we have,
13 and actually we can see something very useful in my opinion
14 if we compare the sales ramp up of the Itanium processor
15 based systems with the PA-8000 based systems in their early
16 years. I prepared a graph that shows that, and if we could
17 move to that, Mr. Anderson.

18 Q Yes, slide 50, please, 50. Is this what you were
19 asking for?

20 A No, sir. The graph that moves the Itanium. That's
21 it.

22 Q My apologies.

23 A Now, if we were in a business school classroom, we
24 might call this a case study, because it's going to allow us
25 to compare the history of HP sales of Itanium based

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1 processors, Itanium based servers and workstations, with
2 sales of PA-8000 based workstations. And the way that I've
3 done that in this case study, if we keep calling it that, is
4 to take the Itanium sales, which actually started here, and
5 I've just moved them over on the graph so that we can see how
6 the two products have done in a consistent period of time,
7 namely, the first five years or so in which they're sold.

8 Now, the reason this is useful, in my opinion, is
9 that it holds constant as many things as the data and
10 documents in this case make it possible to hold. That's what
11 you like to do in a case study in a business school, you're
12 looking to see, well, Nestle launched this particular product
13 and then they launched another product, and they both had the
14 Nestle brand name and they both had certain characteristics
15 and they both had the Nestle sales force, and how did they do
16 with one another. And the students will look for ways in
17 which when they're making those decisions themselves, they'll
18 learn something about how to launch new products.

19 We've done the same thing here, not perfectly, of
20 course, because we can't do what we can't do without more
21 data, but these data control certain things. We know --
22 actually, there is another chart that I think we just started
23 to look at yesterday, Mr. Anderson, that compares the
24 PA-8000, the PA-7000 and the Itanium.

25 Q Oh, yes. If we go back to slide 46, please.

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1 A Here's our case study in effect. We've got the
2 same market, it's the UNIX commercial systems market. We've
3 got the same issue, we saw that on the document we looked at
4 a little while ago, the issue is how do you beat the
5 competition, that's everyone's desire here, including HP's.
6 We've got the same company.

7 Now, that's important because there is no
8 disagreement about the fact that HP brings a lot to and puts
9 a lot into its servers and workstations in addition to the
10 accused processor. There is a brand name, there is a sales
11 force, there is a reputation. All of those things clearly
12 affect demand for the servers and workstations, but in this
13 comparison we're going to look at the same company, HP sold
14 the Itanium, HP sold the PA-8000 based servers and
15 workstations.

16 But we have very different outcomes. The red line
17 never gets very high in the five years that we have data for.
18 And although I've got no expertise on this, both the
19 documents and the testimony that we've heard talk about the
20 perception in the marketplace that the Itanium based systems
21 were not performance leaders, in contrast to the documents
22 and the testimony that characterized the PA-8000 based work
23 servers and workstations as performance leaders.

24 Q If we could look at slide 63 for a moment. Is this
25 one of the materials you're referencing there, Dr. Stewart?

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1 A Yes. This is a newsletter, a little newspaper that
2 focuses on the computer market, the server and workstation
3 market. And it says here, what we see in the data, thus far,
4 the shift has progressed slowly, with Itanium sales falling
5 well below expectations and with most customers picking up
6 small workstations and low-end servers as opposed to big
7 iron.

8 Q Now, I would like to take a slight detour. Were
9 you able to access any -- Mr. Cox testified that he had seen
10 certain customer survey information and he indicated that
11 that customer survey information would discuss various
12 things, including sometimes performance as being the most
13 important factor in their decisions. Have you seen any
14 customer --

15 MR. ALLCOCK: Objection; leading, misquotes
16 the evidence.

17 THE COURT: You can proceed.

18 Q Have you seen any consumer or customer survey
19 information in your analysis in this case?

20 A Very little. Mr. Cox said he had seen several.
21 Actually, I believe the only document that was provided that
22 I saw was the results of a single survey, which does shed
23 some light on the issue, nevertheless.

24 Q Let's turn to slide 32, please. Is this what you
25 reference, Dr. Stewart?

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1 A Yes, sir.

2 Q Please explain what you take from this particular
3 customer survey.

4 A This is reporting the results of a survey of
5 customers, if my memory is right, it was customers that had
6 purchased either HP or Sun servers and workstations. And it
7 asks them what is it that will cause you to switch vendors.
8 And I've highlighted the one that's relevant here, but let's
9 look at the others first because they're obviously important.
10 And this one is number four on the list, it's not number one
11 on the list, like some of them apparently that Mr. Cox had
12 seen.

13 What would cause you to switch vendors? Well, poor
14 service and support, no surprise there. But this would
15 appear to have little or nothing to do with the product, has
16 to do with the company. So it's not really telling us very
17 much about whether performance is or is not important, it's
18 telling us if you as a company have a good support team,
19 obviously that's going to be a good thing.

20 Q Dr. Stewart, let me stop you for a second. Is
21 there anything in your view of the materials that indicates
22 that the differential between the PA-7000 bases sales and the
23 PA-8000 bases sales and the Itanium bases sales was due to a
24 difference in HP's ability to service and support those
25 sales?

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1 A No, sir, I haven't seen anything that indicates
2 that.

3 Q Please go on.

4 A The second one is a performance related
5 characteristic, number two on the list, and it says poor up
6 time performance. Up time, I think, the opposite of down
7 time. If you've got poor up time performance, you've got a
8 lot of down time, which means the server is not up and
9 working and you don't have it available to you. Obviously
10 that's important, it would be important to any of us.
11 Obviously, it's a performance related issue, but it's not
12 really getting at the issue of how well does the server and
13 workstation do its job, it's just does it stay up and
14 running.

15 Q Let me follow up on that. In your review of the
16 information that was provided to you, did you see anything
17 that would indicate with respect to PA-7000 based systems,
18 PA-8000 based or Itanium based systems that poor up time
19 performance was a differentiator between those for customers?

20 A No, sir.

21 Q Go on, please.

22 A I'll move a little more quickly, I apologize. The
23 third most important reason why customers would switch
24 vendors, according to this survey, is unacceptable price
25 increases. Again, no surprise, but again it doesn't have

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1 anything to do with performance.

2 Q So if you'll stop. In looking through the
3 financial data that you were provided, configuration guides
4 and such things, were you able to discern whether there was
5 any price increase differential between PA-7000 based,
6 PA-8000 based systems or Itanium based systems that would
7 have accounted for the different revenue slopes that we've
8 seen in that prior chart?

9 A No, sir, nothing that's specific. We know that,
10 for example, the PA-8000 servers and workstations were
11 typically more expensive than the PA-7000, but they also
12 offered much higher performance. So I think logic suggests
13 that from the perspective of customers, the price performance
14 ratio became more attractive with the PA-8000 than the
15 PA-7000, but it's because of the performance aspect of that.
16 I haven't seen anything to suggest substantial price
17 differences.

18 Q And then the final point here is the poor
19 application performance. What is this indicating with
20 6 percent, 33 percent, 33 percent? Could you explain that to
21 the jury based on the reading of the document?

22 A Yes. What it appears to be is that they're asking
23 these customers that they've surveyed, what's the most
24 important reason that you would switch vendors. And then you
25 go down that first column and I think those numbers probably

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1 add to 100 percent or close to it. What's the second most
2 important reason, and what's the third most important reason.
3 And what this last line tabulates is that 72 percent of the
4 surveyed respondents, the customers, said that poor
5 application performance, finally an issue that gets to the
6 heart of the performance characteristics of the product,
7 would be very important to them.

8 Q Dr. Stewart, I would next like to turn to your
9 analysis with respect to a royalty rate to be applied in this
10 case. And if we can turn to slide 52, please.

11 What are you conveying with this slide with respect
12 to your analysis?

13 A A step that I went through in order to come to an
14 ultimate conclusion regarding an appropriate royalty rate.
15 Remember, we will need to determine two things; royalty rate,
16 royalty base, multiply those two together to get to a total
17 royalty. And I do that because, as I said yesterday before
18 we finished, in my opinion there were two economic markets
19 that we needed to look at in order to come to a conclusion
20 ultimately regarding a reasonable royalty in this case.

21 The first of those, the server and workstation
22 market in particular, the UNIX server and workstation market
23 in which HP competes. And we've talked about that, and I
24 think from my perspective as an economist we've gotten about
25 as much information from that market as we can. In a perfect

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1 world there would have been documents that would have
2 isolated more precisely the financial benefit of the
3 invention so that we would be able to hone in. But all we've
4 seen have been some discussions of the boundaries of the
5 differential of the performance.

6 We see the difference in sales revenue between the
7 Itanium based servers and the PA-8000 based servers, quite a
8 few hundreds of millions of dollars of profit differential
9 between that blue line and that red line. But that doesn't
10 take us as far as we need to go, because we know that not all
11 of that performance, all of that performance advantage would
12 fairly be ascribed just to the patented invention.

13 So we need another way to focus our analysis, and
14 for that we are going to turn to an analysis of another
15 market, a market for technology and, in particular, a market
16 just like a server and workstation market, but a market for
17 patented licenses in the relevant technology field,
18 integrated circuits and semiconductors. And the way that I
19 have done that is the way that I have done on dozens
20 occasions in the past, using a royalty database that's called
21 RoyaltySource.

22 What the folks at RoyaltySource did many years ago,
23 very useful, and I presume very profitable to them, was to
24 start collecting all of the royalty information that they
25 could find on just about every industry and just about every

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1 publicly available source. So they called annual reports,
2 they look at press releases. They have, you know, I imagine,
3 people sitting in cubicles just reading all the time
4 everything that comes out about licensing information. And
5 because they've been doing this for years and years, they
6 have what appears to be a huge database of patented licensing
7 information.

8 And for people like me that are interested in a
9 technology market, it's the same sort of advantage that all
10 of us have now when we're looking for information, instead of
11 spending days or weeks or months in a library, we all sit at
12 our computer and ask Google a question. And basically you
13 can ask the same question of RoyaltySource. And the question
14 that I asked here was what information can you give me about
15 royalty rates and the integrated circuit in the semiconductor
16 industry. Obviously, it's not going to be a perfect measure
17 of what a reasonable royalty would be, but in the context of
18 our analysis, I think we will find it helpful.

19 Q Next slide, please. And what did you learn based
20 on your review of the RoyaltySource data that you were able
21 to attain?

22 A I found about three dozen -- information on about
23 three dozen patented license agreements in the semiconductor
24 chip and integrated circuit industry. I should say that
25 because the license agreements themselves are usually

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1 confidential, you don't get from RoyaltySource typically the
2 license agreement, what you get is an abstract of that
3 agreement. If a company says that its 10K, last year we
4 negotiated a license with company X and the royalty rate was
5 Y percent, that's what you'll get from RoyaltySource.

6 And what I found when I took all of these royalty
7 rates, tabulated them, eliminated a number of them because
8 they were not negotiated in arm's length transactions but
9 reflected something other than arm's length negotiation, what
10 I found was that the median royalty rate had two important
11 characteristics. One, without exception, I believe -- I
12 can't think of any exceptions, in every case the royalty rate
13 was paid on whatever it was the customer, the licensee, sold.

14 So if the company that was taking out a license
15 sold computers, that was the royalty base. If they sold
16 something else, and not all of these license agreements by
17 any means relate to computers, chips, integrated circuits,
18 are used in lots of things, whatever it was the company sold
19 with few, if any, exceptions is what the royalty base was.
20 So that was useful information. It's consistent with what we
21 have concluded for other reasons would be the appropriate
22 royalty base here.

23 And secondly, we found that the typical royalty
24 rate and, in particular, I mean the median royalty rate, the
25 middle royalty rate, was 3 percent. And that was true for

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1 the entire sample. That was also true for what might be
2 regarded as the most useful sample of all, the license
3 agreements that had been negotiated prior to August of 1996.
4 Because remember we're in a hypothetical negotiation in
5 August of 1996, conceptually license agreements that had been
6 negotiated prior to that would be the ones in a hypothetical
7 world that would be available to these negotiations. As it
8 turned out, it didn't matter which assumption I made was most
9 reasonable, the median royalty rate in each case was
10 3 percent.

11 Q Next slide, please. What are you showing here,
12 Dr. Stewart?

13 A What I'm showing here is an actual table from my
14 report, my first report that tabulated these. I doubt if
15 anyone can read it better than I can, but that's okay. All
16 that we need to understand here is that this is the
17 tabulation of these 35 patent licenses. In each case I've
18 listed a licensor, that is the company that's granting the
19 license, and a licensee, a company that's taking the license.
20 I've listed the date and I've listed the royalty rate, and
21 then I've just tabulated all of them, and the average over
22 the entire period was 3.57 percent, the median was
23 3.0 percent.

24 As I said, I thought the median was the most useful
25 number to get an indication of what was going on in this

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1 market for licenses, so that's what I used.

2 THE COURT: Would you ask Mr. Hoy just to blow
3 up a small portion of that so that we can see some of those
4 details? All the way across, Mr. Hoy.

5 Q So can you explain what we're seeing here?

6 A These are just the first five on the list. Column
7 A is the licensor, the company that's granting the license.
8 The first one, and they're just listed in chronological
9 order, so this is one that was listed in 1980, I believe, and
10 the licensee is a company called Irvine Sensors Corporation
11 and the royalty rate that we see there is 3.5 percent. The
12 next one is the company, the licensor is a company called
13 XCOR, I believe, the licensee is Intel, the date is 1985, it
14 looks like, the royalty rate is 3 percent and so on. So I
15 simply tabulated all of those, calculated the average and the
16 median but used the median as the central tendency of this
17 market for patented licenses.

18 Q The next slide. What are you doing here,
19 Dr. Stewart?

20 A This shows the last of the tables that I have
21 prepared. In this case, in response to some comments made by
22 one of HP's experts, Mr. Osterndorf, Mr. Osterndorf suggested
23 that several of these license agreements had not been
24 negotiated at arm's length or because of other
25 characteristics wasn't really giving a fair reading in this

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1 marketplace for patent licenses.

2 I agreed with some of those. I had inadvertently
3 included some of the agreements which had resulted in
4 litigation, which is obviously not an arm's length
5 negotiation. I excluded those. There were two or three
6 others that I'm not sure that Mr. Osterndorf and I are in
7 agreement as to whether they should or should not reasonably
8 be included, but to minimize the differences between us, I
9 simply took out every one that he raised any question about,
10 leaving us with 23 patent licenses. The median didn't
11 change, however. The average went up just a tiny bit, but I
12 rely on the median as the typical central tendency of prices
13 in effect here, the price of technology, these licenses and
14 the royalty rates associated with them. So the 3 percent
15 didn't change.

16 Q Did Mr. Osterndorf identify any of the listed
17 agreements in the RoyaltySource data that didn't provide for
18 a royalty on systems or the thing that the customer is
19 selling?

20 A There were a couple of agreements in which the
21 royalty rate is more cost based than revenue based. Those,
22 when you read them more carefully, in looking at some of the
23 underlying information that Mr. Osterndorf was able to
24 provide, we see that they are more in the character of
25 development agreements. That would -- a cost based agreement

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1 would make more sense, where a development agreement
2 typically you're paying somebody to develop something for you
3 and a payment that's tied to cost would make more sense. But
4 I agreed in those cases that it would have a somewhat
5 different characteristic.

6 Q You mentioned Mr. Osterndorf a couple times. Would
7 you please explain why you're referring to Mr. Osterndorf in
8 your analysis for?

9 A I apologize if I forgot to do that. Mr. Osterndorf
10 is an expert of HP's.

11 Q If you can turn to the next slide, please. You
12 have added a new discussion down at the bottom of the page.
13 What are you doing here?

14 A Remember we mentioned yesterday the ground rules
15 for the ultimate royalty rate determination. This so-called
16 hypothetical negotiation that takes place at the time of the
17 first alleged infringement, approximately August of 1996.
18 Like any negotiation, hypothetical negotiators need a
19 starting point, a guide post. And I think here, as I have
20 concluded in many instances, that a reasonable guide post
21 would be what you would find from publicly available royalty
22 rate information.

23 In this case, in my opinion, the RoyaltySource
24 database provides a sensible opportunity to choose a starting
25 point royalty rate and, therefore, I think a royalty rate of

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1 3 percent would have been a reasonable starting point for
2 this hypothetical negotiation.

3 Q Mr. Hoy, if we could turn to slide 58, please.

4 Would you please explain your adjustments that you
5 were making to the guide post 3 percent median rate?

6 A Yes. We've got a starting point but we need an
7 ending point. And in order to get to that ending point, what
8 I have done is go through an economic analysis, guided by
9 what are called Georgia Pacific factors. They're called that
10 simply because there was a court case many years ago, I think
11 in the 1960s, a patent case, in which one of the parties was
12 a company called Georgia Pacific and the name just stuck.
13 There were 15 factors listed by the judge in that case and
14 they have come to be known as the Georgia Pacific factors.

15 These Georgia Pacific factors have a lot of
16 economic content. Not all of them are relevant in this case,
17 nor in most cases, in my experience. There are 15 of them
18 altogether. And you see that my list there starts with
19 number two. That's because Georgia Pacific factor one didn't
20 have any relevance in this particular case, didn't have any
21 information which allowed Georgia Pacific factor one to shed
22 any light on the outcome of the hypothetical negotiation, so
23 I start with number two.

24 Q Would you please discuss your considerations of
25 what you considered the relevant economic Georgia Pacific

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1 factors in coming to the opinion that you have on the royalty
2 rate in this matter?

3 A Yes, sir. I'll try to go through them fairly
4 quickly. Factor two is the rates paid by the licensee. In
5 this case that's HP because HP is on the licensing side of
6 the hypothetical negotiation, and whoever the representative
7 of Dr. Torng's patent, you can think of it as Cornell, I
8 suppose, are on the other side of the hypothetical table,
9 they're the licensor in the terminology of these factors.

10 The rates paid by the licensee for the use of other
11 patents comparable to the patent in suit. Actually, we have
12 only fairly limited information which is a little surprising.
13 HP, a big technology company, you would think HP has lots and
14 lots of licenses that it's negotiated, and in fact it does
15 have a substantial number, but most of those are what are
16 called cross licenses. A cross license comes about when I've
17 got some patents and you've got some patents, I license you,
18 you license me, all in the same transaction, and often there
19 will be no royalty rate that is specified. The agreement
20 will simply say, I'll give you a license to all of my
21 patents, you will give me a license to all of your patents,
22 thanks very much, no money changes hands. And HP has several
23 of these cross licensing agreements. They don't help us,
24 though, in our determination for royalty rate because there
25 is no royalty rate there in the cross license, typically.

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1 Certainly in several of HP's it's a royalty free
2 cross license that we don't have any useful information.
3 There were three agreements that did, that were helpful to
4 some extent in shedding light on the outcome of the
5 hypothetical negotiation. They were helpful in two regards.
6 One, all three of these licenses taken by HP were on systems,
7 they were on what was actually being sold by HP, a sort of
8 common theme as we've seen through most of these agreements.

9 The other thing, though, that was relevant was that
10 two of the three royalty rates that were specified were less
11 than the 3 percent starting point. One of them was higher
12 than the 3 percent starting point, unbalanced, and they would
13 have been a little bit less. So I concluded that the right
14 way to look at this Georgia Pacific factor was to consider
15 that it would have a negative impact on the starting point of
16 3 percent.

17 We've started at 3 percent, the hypothetical
18 negotiators say we've got some licenses, by the way the
19 average of those is less than 3 percent, that means we should
20 pay less than 3 percent. So just making that up as a
21 characterization in my imaginary negotiation, but in my
22 analysis I take that to be a negative factor. So we've
23 started at 3 percent, we're working our way down.

24 Number four, the licensor established policy and
25 marketing program, does it want to maintain a patent

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1 monopoly. It doesn't mean a monopoly in any sensical
2 economic sense of the word, just a monopoly over the use of
3 the patent, or does it want to license the patent. Cornell,
4 you may remember, offered to license the patent. Cornell did
5 not have an interest in keeping the patent to itself. It
6 would have, therefore, been glad to offer a license. If on
7 one side of the table you've got somebody who's glad to give
8 you a license, would you expect that to lower the royalty
9 rate, other things equal. So I took this to be a negative
10 factor.

11 Number five, the relationship between the parties.
12 Remember we talked earlier about lost profits and why that
13 makes sense, if you've got competitors, if the patent holder
14 were a competitor, you would expect this to be a positive
15 factor, because if I'm in the marketplace competing with you,
16 I might be a little bit reluctant to license my technology to
17 you to make it easier for you to compete. But that's not the
18 case here, Cornell's obviously not a competitor, so I took
19 this to be a negative factor.

20 And number seven, for somewhat technical reasons,
21 other things equal, the longer a patent has left to run, you
22 would expect to end up with a lower royalty rate. At the
23 time of the hypothetical negotiation this patent was not
24 quite halfway through its life, it had a little bit more than
25 half its life to run, so this would be a very modest negative

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1 factor.

2 We've gone through four Georgia Pacific factors,
3 all of them negative. If we could turn to the next one,
4 Mr. Anderson, please.

5 Q Yes, sir.

6 A Factor eight, the established profitability of the
7 product made under the patent, its success, its popularity.
8 Obviously, a strong positive factor. We've seen the figure
9 on the sales, roughly \$36 billion in sales of the servers and
10 workstations incorporating the accused processor. This
11 refers to the product made under the patent. Of course,
12 that's for the jury to decide, but our assumption in going
13 through this analysis is that the product, the patent has
14 been used. So a strongly positive factor here because of the
15 very large profitability of the 26 percent profit margin and
16 the \$36 billion of sales. If we could turn to the next one.

17 Q Next one.

18 A We've got four more that are relevant. Number 9,
19 10 and 11, from my perspective as an economist they're
20 different ways of saying almost the same thing. The utility
21 and advantages of the patent property, the nature of the
22 invention, the benefits of using the invention, the extent to
23 which the infringer has made use of the invention, the value
24 of that use. Although the history of the Georgia Pacific
25 factors is such that they're all considered separately, I

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1 think it makes sense to consider them all at once in an
2 economic context, and they're all equal to as possible.

3 We have heard about the advantages of out-of-order
4 processing. We heard Dr. Smith explain how Dr. Torng's
5 patent is what makes that possible and so on. So 9, 10 and
6 11 all strongly positive factors.

7 So if we're keeping track, we've got four negative
8 factors on the first page, we've now got four positive
9 factors, and we come to Georgia Pacific factor 13. This one
10 is very important as well, extremely important, because what
11 this focuses on is what is contributed by other than the
12 patented invention. And I don't think any reasonable person
13 would have any doubt that HP has made numerous contributions.
14 We talked about the brand name, we talked about the company's
15 reputation, we've heard about other contributions to the
16 technology itself that has been made by HP.

17 Now to some extent we get a sense of the relative
18 value of those by comparing the Itanium sales, which
19 obviously incorporated a lot of those, with the PA-8000 based
20 sales, and we see that without performance leadership HP was
21 at a disadvantage, but that does not negate the importance of
22 this factor. Obviously, there have been many contributions
23 made by HP. I concluded, therefore, this would be a strongly
24 negative factor in the hypothetical negotiation.

25 So, summing up, we had four negative factors on the

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1 first page, we had four positive factors on the second and
2 third page. Those positive factors being very important
3 because of the profitability of the product and its success
4 and so on. But we also have a very important negative factor
5 here in number 13 to account for all of HP's contributions.
6 And I concluded, therefore, that there was a negative tilt to
7 the Georgia Pacific analysis and that reasonable negotiators,
8 therefore, having started at a 3 percent hypothetical
9 negotiated starting point would have ended up with a royalty
10 rate of two and a half percent.

11 Q Now, we talked a bit about Mr. Osterndorf. Do you
12 have an understanding of the methodology that Mr. Osterndorf
13 has indicated should apply to arriving at the royalty rate in
14 this matter?

15 A Yes, sir.

16 Q Could you briefly describe it?

17 A Mr. Osterndorf has suggested instead a size based
18 and cost based methodology, I think it is fair to
19 characterize it as. He proposes that the royalty rate should
20 be adjusted to account for the fact that the die area that
21 actually contains the circuitry that is accused of
22 infringement is very, very small, actually the cost of making
23 them is small as well. Now, from my perspective, I would
24 have to say that does not make economic sense to me.

25 Q Why is that? And would you speak a little more

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1 into the microphone?

2 A Yes, I apologize. Two reasons. First of all, it
3 makes the, I think, very strong and unsupported assumption
4 that you can get a measure of the importance of an invention
5 by some sort of physical measure. There is certainly nothing
6 in economics that tells us that should be true. The
7 relationship between the value of something and its cost or
8 the value of something and certainly its size just isn't
9 there. And particularly in microprocessor technology, I've
10 got no expertise in it, but I don't think you need to be an
11 expert to notice that one of the great benefits of
12 miniaturization is that microprocessors have gotten smaller
13 and smaller and smaller over time.

14 Q Do you recall Dr. Smith's testimony on that issue,
15 Dr. Stewart, with respect to what happens as we shrink the
16 microprocessor?

17 A I do. And if I remember correctly, he pointed out
18 that if you shrink the size of the transistors and put more
19 and more of them on a chip, you've got them closer and closer
20 together, and that in itself speeds up the processor. So I
21 understand Mr. Osterndorf's point of view, but in my
22 perspective as an economist, it's not one that I can agree
23 with.

24 Q Now in terms of slide 69, please. You talked about
25 alternatives. I would like you now to turn to the in

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1 particular alternative royalty base definitions that are
2 available in this case, including your discussion related to
3 CPU and microprocessor revenue.

4 A Okay. As I have explained, I think there are a
5 number of reasons for concluding that the appropriate royalty
6 base would be revenue from servers and microprocessors. But
7 that is not the only conceptual royalty base. And HP's
8 accounting expert, Mr. Wallace, has made some tabulations of
9 possible alternative royalty bases.

10 The difficulty in doing that, and I think
11 Mr. Wallace and I would agree on this, is that only a few
12 processors or central processing units were sold in a
13 meaningful sense separately. Nevertheless, there are some
14 data in the databases provided by HP, the so-called Express 2
15 and OSRM databases, from which one can tabulate a price. I
16 would mentally put quotes around the price, because it is not
17 in most cases an arm's length transaction.

18 But a price can be tabulated in one of two ways.
19 One way is to look at the prices for the CPUs that were
20 transferred to the strategic partners. I don't know whether
21 that would fairly be characterized as an arm's length
22 negotiation or not, but at least is a transaction.

23 Q If we could turn to slide 71 for this discussion.

24 A Thank you.

25 Q So we talk about \$36 billion that you mapped out

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1 for systems. Now would you please talk about CPU processors
2 that you listed here in this slide?

3 A Yes, sir. Mr. Wallace tabulated the revenue, again
4 with quotes around it, from CPU sales.

5 Q Would you explain to the jury your understanding of
6 what the CPU is?

7 A Yes, of course. I'm sure my understanding is in no
8 way superior to the jury's, you've heard it and I've heard
9 it. We heard the CPU referred to as about the size of a
10 brick, and that's what I understand as well. It is the
11 processor and it includes some circuitry as well as a heat
12 sink which just absorbs heat from the processor, and a few
13 other things, and the ultimate size of it is roughly like
14 this.

15 The processor itself of course is much smaller. In
16 the Express 2 and OSRM databases there are prices associated
17 with the CPU. And they're associated not necessarily with
18 independent transactions. But because I've bought quite a
19 few computers for my household, I've got two kids now in
20 college and we've gone through quite a number of them, and I
21 suspect I see heads nodding, we've all bought computers, and
22 when you buy your computer, you either do it on-line, over
23 the phone or in a catalog, and you say I'll say this sort of
24 base size of the laptop, if you're buying a laptop, and I'll
25 take this processor. And if one of my kids is going to play

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1 games on that, I'll scratch that off, I better get a more
2 powerful processor, et cetera. And there will be prices.
3 You're not buying the processor, you're not buying the disk
4 drive, you're buying the computer, but there is a price.

5 In the database, the HP database, there are these
6 prices, and actually we saw yesterday how those prices show
7 up in these ordering guides and configuration guides, you
8 choose either processor A or B. Mr. Wallace used those
9 prices as well.

10 So that even though we don't have market
11 transactions, in a sense we've got prices, and using those
12 prices for the CPU, Mr. Wallace tabulated the royalty base
13 based on the CPUs to be \$23 billion, approximately, about
14 two-thirds of the \$36 billion system sales.

15 Now, he also made a more complicated, somewhat more
16 difficult calculation, which was an attempt on his part to
17 get to processor revenue. Now, several of these processors
18 have never been sold in any kind of arrangement, not even to
19 a strategic partner. What Mr. Wallace did was take the
20 information that he had from these sales of these processors
21 to the strategic partners and then make some assumptions
22 about what a reasonable assumed price would be for the other
23 processors. In one case he did it by taking the ratio of the
24 CPU prices to the processor prices and then multiplying,
25 using that ratio to fill in the blanks in the missing

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1 processors. In another case he did it based on cost, the
2 standard cost of the processor compared to the standard cost
3 of the CPU, and he used that ratio to make an estimate of the
4 price of the processors. And under those two methods he came
5 to a conclusion that the processor revenue was either a
6 little more than \$8 billion or a little less than \$6 billion.

7 So, we've got a number of measures of revenue, one
8 of them at the top, of course a measured real revenue, a
9 number of measures of revenue based on I don't believe I've
10 mischaracterized what Mr. Wallace did in his tabulations.

11 Q If we could turn to slide 73, please. What are you
12 conveying here, Dr. Stewart?

13 A My opinion, and as I said is that the appropriate
14 royalty base with the server and workstation revenue,
15 however, Cornell is seeking a reasonable royalty based on the
16 revenue from the actually -- I'm sorry, I mislabeled that
17 23 million. That should read revenue with quotes around it
18 from CPUs included in the accused servers and workstations.
19 I apologize for that typographical error.

20 Notwithstanding my view that the appropriate
21 royalty base would be the revenue from sales of servers and
22 workstations, Cornell is seeking a royalty base on the
23 royalty base of CPU based on a tabulation and calculation of
24 CPU revenue. I characterize that as a minimum appropriate
25 royalty base for the reasons that I talked about earlier.

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1 You will remember that I came to the conclusion a
2 few minutes ago that a reasonable royalty would be two and a
3 half percent. However, you also remember that that
4 discussion was focused on systems and workstations sales, the
5 licenses, the license agreements in the RoyaltySource
6 database were for the most part based on system sales, HP's
7 own license agreements tie royalty payments to system sales
8 because of the reasons that I went through at some length.
9 My conclusion is that that is the appropriate royalty base.

10 Q Royalty base or royalty rate?

11 A Royalty base, the servers and workstations.
12 Therefore, my conclusion would be that an appropriate royalty
13 rate would be at a minimum two and a half percent.
14 Multiplying two and a half percent by the \$23 billion would
15 lead to a royalty payment of \$575,137,651. In my opinion,
16 the lower limit to the reasonable royalty in this case.

17 Q Now, if we can turn to slide 72. If you could
18 explain to the jury what you're doing with respect to this
19 graph?

20 A Yes. An issue in this dispute, as I understand it,
21 is where products are sold and other aspects associated with
22 the geography of the movement of the products. Once again,
23 somewhat surprisingly, the HP databases don't shed as much
24 light on this as I started out at least expecting that they
25 would. For example, focusing on the microprocessors, HP

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1 states that they are manufactured in the U.S., in Ireland and
2 in Canada, but they have not apparently been able to provide
3 a percentage breakdown, so we don't know what that breakdown
4 is. What we do know, however, is that all of the
5 microprocessors pass through the U.S., they pass through an
6 HP facility in Puerto Rico where they're soldered on the
7 motherboard, that's the beginning of the brick construction,
8 I believe, or a heat sink is added at that HP facility in
9 Puerto Rico.

10 Q If I can stop you for a moment. In your slides you
11 have included lines saying Exhibit P-1657, for example, HP's
12 response to interrogatories November 30, 2005. Why are you
13 including those particular, that particular information in
14 the presentation that you provided?

15 A Thank you for asking. Simply because that's where
16 HP provided that information, in a response to a question I
17 guess that was asked by Cornell's attorneys, and I had the
18 opportunity to look at that so-called response from which I
19 found this information.

20 Q You can go back. And that's true for all of the
21 slides you've been going through where you cite to something
22 that's the source of the information that you were looking
23 at, at least in part?

24 A Correct. For example, the graphs that we looked at
25 came from a table in my report where I made those tabulations

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1 and so on. If you were looking at the fine print on the
2 graphs, you saw things like that.

3 Q And the revenue information and profit information
4 that you derived from HP records that were provided?

5 A Yes, that's correct.

6 Q Sorry for interrupting. Please continue.

7 A Just to finish, you see more blanks because HP
8 apparently is not able to provide any percentage breakdown of
9 where the other components in the servers and workstations
10 are made other than to state that they're made in the U.S.
11 and throughout the world. We do know something about where
12 the servers and workstations are actually sold. Roughly
13 40 percent of them are sold in the U.S. Roughly 60 percent
14 of them are sold outside the U.S.

15 I say roughly because if you look at the fine print
16 in the box, we know from the HP documents that the net
17 revenue from sales other than 2000, 2006, which is in the
18 Americas, which isn't just the U.S., they tabulate their
19 sales based on broader geographical regions. Sales in the
20 Americas are 40.25 percent of the total, which is why I said
21 roughly 40 percent in the U.S., I don't know what the precise
22 percentage is.

23 Q So if we can return to Exhibit 73 at this time.
24 So, based on your analysis, Dr. Stewart, could you please
25 just tell the jury before we conclude what that \$575,137,651

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1 number is?

2 A Yes, sir. In my opinion, that's the lower limit to
3 the reasonable royalty that would give Cornell adequate
4 compensation for the use of Dr. Torng's patent, if the jury
5 concludes that the patent has been infringed by HP.

6 MR. ANDERSON: That's all I have on direct,
7 Your Honor.

8 THE COURT: Thank you, Mr. Anderson.

9 MR. ALLCOCK: Your Honor, I'm ready to proceed
10 but I need to get a couple of things.

11 THE COURT: Let's take a ten minute break and
12 give the jury a chance to stretch its legs and then we'll
13 come back.

14 THE CLERK: Court stands in recess for ten
15 minutes.

16 (Recess at 10:25.)

17 (Reconvene at 10:40.)

18 THE COURT: We're back on the record. I think
19 there was a pending motion, Mr. Anderson, to qualify
20 Dr. Stewart as an expert?

21 MR. ANDERSON: Yes, Your Honor.

22 THE COURT: He is entitled to offer his
23 opinions, as he has already done, so your motion is granted.

24 MR. ANDERSON: Could we inform the jury that
25 he has been qualified as an expert?

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1 THE COURT: Yes, we certainly can. I'll do so
2 when we return. Mr. Allcock?

3 MR. ALLCOCK: I just have a question, Your
4 Honor. I don't know, I haven't thought yet what I'm going to
5 do once I start asking questions, but are there any
6 restrictions on what we can do with respect to informing the
7 jury as to how it is that his opinion now is different than
8 it was in his expert report?

9 THE COURT: Yes, I think you can -- I don't
10 think we need to discuss with the jury our little legal
11 bickerings. I don't think you need to refer to the Court's
12 orders in this respect any more than refer to the Court's
13 orders with respect to claim construction as I've ruled
14 earlier. So, to be very explicit, it's off limits to say the
15 judge somehow intervened here.

16 MR. ALLCOCK: I understand that. So then the
17 issue is -- okay, well I'll just muddle through. How are we
18 to explain it?

19 MR. ANDERSON: Dr. Stewart is prepared to
20 answer the question that he is not offering an opinion in
21 this case that the --

22 THE COURT: Excuse me?

23 MR. ANDERSON: Dr. Stewart is prepared to
24 answer the question are you offering an opinion that the
25 royalty base of these servers, workstations in this matter

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1 today, he is prepared to answer no, I am not offering that
2 opinion.

3 THE COURT: Well, then that's clear.

4 MR. ALLCOCK: Because frankly, Your Honor, on
5 direct it wasn't that clear to me.

6 THE COURT: Well, you can make -- you can
7 clarify that, that's entirely appropriate. And I don't think
8 then you need to press Dr. Stewart on that any further, his
9 answer will be clear, and we can proceed from there.

10 MR. ALLCOCK: Your Honor, one other. There is
11 a potential witness, Mr. Roth, that we're going to call in
12 our case. I didn't mention it before the direct, he is in
13 the courtroom, but I am going to get into areas on cross that
14 will involve his testimony that's coextensive.

15 THE COURT: Mr. Poplawski?

16 MR. POPLAWSKI: Mr. Roth has been and still is
17 an attorney of record for the plaintiffs in this case.

18 MR. ALLCOCK: He is a witness.

19 THE COURT: What's he a witness on?

20 MR. ALLCOCK: On the IBM matters.

21 THE COURT: He is an attorney, can't he be
22 present? Is he testifying on facts?

23 MR. ANDERSON: What I understand that the
24 inquiry will be on discussions between IBM and Cornell
25 subsequent to the filing of this litigation about whether or

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1 not a license existed and whether or not IBM and Cornell
2 could come to an accommodation to relieve any concern IBM may
3 have related to its posture concerning the patent. Those
4 discussions were held between IBM counsel and Cornell
5 counsel.

6 THE COURT: So the answer is he is talking
7 about facts?

8 MR. ANDERSON: Facts that he was engaged in.

9 THE COURT: Let's in an abundant of caution,
10 let's ask him to leave the room then, if we're going to be
11 referring to those facts in another context, Mr. Poplawski,
12 and he will be free to return later.

13 Now, we have one other thing I would like to
14 deal with for the convenience of those people working with me
15 here doing a marvelous job. We're going to want to do a
16 charge conference sometime. What do you propose is the
17 timing of that? I'm not very excited about Monday and
18 neither is my staff. That seems to me to direct us towards
19 tomorrow, Saturday.

20 MR. ALLCOCK: We're at your disposal, Your
21 Honor. In addition, possibly subsumed within that discussion
22 is a discussion of the claim construction issues that we've
23 raised.

24 THE COURT: I intend to do that. That's all
25 part of the jury instruction and we'll do that. Just a word,

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1 why don't we start a little later, shall we say 10:00
2 tomorrow?

3 MR. ALLCOCK: That's great.

4 THE COURT: And no dress code. If you show up
5 in shorts, you'll be more than welcome, and although I should
6 be a little cautious, I'm not so sure how much I want to see
7 any of you in shorts. But at least there is no dress code,
8 use your judgment.

9 Are we ready? 10:00 tomorrow we'll have our
10 charge conference and we'll probably go into the afternoon,
11 is my guess. Mike, bring in our jury.

12 (10:45, jury present.)

13 THE COURT: Before you start, Mr. Allcock, I
14 realize that the Court needed to add something that it had
15 missed, overlooked in moving along. The Court would like the
16 jury to know that it has qualified Dr. Stewart as an expert,
17 meaning that he can offer his expert opinions to you.

18 You may proceed, Mr. Allcock.

19 *CROSS-EXAMINATION BY MR. ALLCOCK:*

20 Q Thank you, Your Honor. Good morning, Dr. Stewart.

21 A Good morning.

22 Q I want to talk with you first about the overall
23 picture of your opinion. There are essentially, as I
24 understand it, two components to your total opinion; the rate
25 that you apply and then the base that you apply, is that

1 correct?

2 A Two components to the actual royalty calculation,
3 if that's what you mean by my opinion, then yes.

4 Q Yes. And the rate is what, sir?

5 A Two and a half percent.

6 Q And the base is what, sir?

7 A I'll have to read it off the sheet. 23 billion
8 005 --

9 Q Is it okay if I round it?

10 A Yes.

11 Q All right. And then your total damage number based
12 on those two is what?

13 A I don't have that number written down up here, I
14 don't believe, I apologize.

15 Q I wrote it down.

16 A Thank you.

17 Q Let's -- does 575 sound right?

18 A I think it would be approximately that, yes, sir,
19 575 million.

20 Q Now, in opening statement we heard a number of
21 900 million. That's not your number?

22 A That is not the number I have calculated here,
23 that's correct.

24 Q And if either the base or the rate are adjusted
25 downwards, that would cause the total to be adjusted

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1 downwards?

2 A Yes.

3 Q Okay. I'm going to start by talking a little about
4 the base. Now, you talked about a number of documents that
5 you reviewed in connection with this case. You reviewed
6 quite a number, didn't you?

7 A Yes, sir.

8 Q And you talked about just some small fraction of
9 them in your testimony here today, is that right?

10 A Well, I think that's fair, as long as we understand
11 it's because I concluded those were the most relevant.

12 Q Right. And you didn't -- I mean, you considered
13 those documents that supported Cornell's position and you
14 considered those documents that were against Cornell's
15 position, is that right?

16 A I guess that's fair as well, but the way I would
17 have said it is simply that I considered the sum total of the
18 information.

19 Q Okay. Can I have exhibit D-25, page 1, the first
20 two paragraphs?

21 This is, I believe, one of the first documents that
22 we saw in evidence in this case. This is a letter from
23 Dr. Torng to Huey Ling at IBM, talking about the invention
24 being subject to a fully paid up nonexclusive,
25 nontransferable license to IBM. Do you see that?

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1 A Yes, sir. Would it be a problem for you to move
2 that because my screen only has a portion.

3 Q How's that?

4 THE COURT: You may have to move that easel.
5 Put is somewhere where I'm sure Dr. Stewart is not impeded.

6 A Actually, Mr. Allcock, if you backed it up.

7 THE COURT: Now I'm the only one blocked, but
8 I'll use this.

9 A I'm sorry, Mr. Allcock, I forgot what you asked me.

10 Q I was talking about Exhibit D-25 that talks about
11 the fully paid up nonexclusive license grant to IBM from
12 Cornell for the '115 patent. Were you aware of this?

13 A I was aware of the letter, and if I remember right,
14 we saw it again on Tuesday when Dr. Torng was testifying. Of
15 course, I don't have a point of view or the expertise to
16 offer an opinion as to whether or not there actually was a
17 license.

18 Q Right. But you're aware that HP has purchased
19 about a third of their chips from IBM, right?

20 A Well, more precisely, I'm aware that HP has made a
21 contention that it's purchased a substantial number of chips
22 from IBM. I don't think I've seen anything that really goes
23 to the level of a precise quantification.

24 Q So, though, that brings me to another point. There
25 are some things in your analysis that you've assumed one way

1 or another because other evidence and other witnesses are
2 going to prove or disprove those points, is that right?

3 A Well, that's certainly right with respect to the
4 issue of infringement. I have assumed simply for my purposes
5 for making calculations that the jury will conclude that HP
6 has infringed Dr. Torng's patent. As to other assumptions,
7 I'm sure you're right that there are other assumptions that
8 I've made but I'm not sure I would give you a blanket
9 agreement. If you would want to just ask me specifically, I
10 would be glad to tell you whether I agree or not.

11 Q Well, in this case you've talked on direct
12 examination about comparable license agreements, haven't you?

13 A If you're referring to the information from the
14 RoyaltySource abstract, then yes, although you'll remember
15 that I qualified the use of the word comparable.

16 Q Right. But you have at least considered other
17 license agreements, correct?

18 A That's fair, yes, sir.

19 Q Let's have Exhibit D-34, the first two paragraphs.
20 This again was referred to in the examination of Dr. Torng
21 and it's an agreement between Cornell and IBM. Do you
22 remember seeing this in the course of your analysis?

23 A Yes.

24 Q And if you look at the bottom of page 4, which is
25 00004, the agreement, under 9?

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1 A I'm sorry, could I impose on you for a copy of the
2 agreement?

3 Q It's in the volume.

4 A Do you know what number it might be?

5 Q It's Exhibit D-34.

6 THE COURT: Can I have one of those this time?

7 MR. ALLCOCK: Yes, Your Honor. I thought one
8 already got up there.

9 THE COURT: I like to follow along.

10 MR. ALLCOCK: I understand. I thought one was
11 up there already.

12 A On which page did you say?

13 Q I'm going to start you off at the bottom of page 4,
14 invention rights.

15 MR. ALLCOCK: Exhibit D-34, page 4, and the
16 Bates numbers I think are for the first time in this trial
17 the same as the page numbers.

18 Q Okay. So, here is a grant by Cornell to IBM of a
19 license of the Torng patent, is that right, sir?

20 A I certainly don't have the expertise to answer
21 that, I apologize. I understand that HP contends that. I
22 also understand that Cornell contends that IBM is not
23 licensed. And I'm certainly not the one to referee that
24 dispute.

25 Q Right. But you've considered a bunch of

1 information that you're not the one to referee in this case?
2 Like, for example, speed and performance of the chip, you're
3 not an expert in speed and performance of the chip, are you?

4 A I would certainly agree with that as well.

5 Q Right. And you considered and in fact showed to
6 the jury evidence on those issues, even though those issues
7 are ultimately for their determination, not yours, right?

8 A Well, I guess it depends on which issue. Certainly
9 the issue of whether the performance improvement is caused by
10 infringement of Dr. Torng's patent is, of course, for the
11 jury to decide. The issue -- I'm sorry, I'll be brief. The
12 issue, though, of performance improvement due to out-of-order
13 processing, I'm not an expert, but the documents I think are
14 pretty straightforward even to a non-expert, and that's the
15 reason I felt like it was useful to talk about that.

16 Q But you considered by my count eight or nine
17 licenses in connection with your direct testimony. Is there
18 some reason this one was left out of your discussion?

19 A The problem with the question, as I understand it,
20 is you're characterizing it as a license. As I understand
21 it, that's a matter in dispute. I certainly recognize that
22 it's HP's contention that IBM had a license, but I understand
23 also that Cornell does not agree with that, and as I say, I'm
24 not in a position to offer an opinion as to which party is
25 right.

1 Q Okay. Let's assume for the moment -- can you
2 assume that in fact this is a license like it says?

3 A Well, the only thing I won't assume is the "like it
4 says" part because I can't interpret what it says in any way
5 that would shed light on whether it really is a license or
6 not.

7 Q Can you assume with me it's a license?

8 A Sure.

9 Q Then let's look at page 2, paragraph 4. Wouldn't
10 the most comparable evidence for the value of the license of
11 a license to the '115 patent be the amount that somebody paid
12 for a license to the '115 patent?

13 A Well, if you're asking the question purely
14 hypothetically and not tying it to this, then yes, I would
15 agree that, of course, an actual license agreement always
16 sheds light on the outcome of a hypothetical negotiation for
17 something that's comparable. The difficulty is if you're
18 asking me to tie that to this agreement.

19 Q I'm not, because you have not considered this
20 agreement, right?

21 A No. On the contrary, I've considered it, but since
22 the parties disagree as to whether IBM was or was not
23 licensed by Cornell, I don't have any ability to make a
24 judgment as to whether that -- whether HP's position or
25 Cornell's position is correct.

1 Q But you stand by your statement that the single
2 most relevant piece of evidence for the value of the license
3 to a patent is licenses that that patent already has?

4 A I don't think I said that. If I said single most,
5 I would have been engaging in hyperbole. I agree that a
6 license for the same or comparable technology, I think we all
7 agree, would be useful information. I don't think I would
8 feel comfortable going beyond that.

9 Q Isn't it the first Georgia Pacific factor?

10 A Yes, sir.

11 Q Now, the other implication of a license to IBM is
12 that -- a license to IBM is that if HP buys its chips from
13 IBM, the chips HP buys from IBM are licensed too, right?

14 A Once again, I understand that to be HP's
15 contention, but I just don't have the expertise to know
16 whether that's true or not.

17 Q Okay. So can you assume that with me?

18 A Sure. Just so I don't mis-assume, can you just
19 give me a sort of short sentence that I'm assuming?

20 Q Yeah. Let's assume that if HP has a license -- I
21 mean, if IBM has licensed the patent, the '115 patent, the
22 chips it sells to HP are likewise licensed and, therefore,
23 not subject to a royalty payment?

24 A So, purely as an assumption without having a point
25 of view of my own as to whether that's right or wrong, I'll

1 make that assumption.

2 Q And approximately one-third of this \$23 billion
3 damage base falls into that category, about one-third of the
4 chips were purchased by HP from IBM, is that right?

5 A It's right that that's what HP contends. As I
6 said, I don't believe anyone can independently verify that
7 from the database in this case.

8 Q Have you, yourself, evaluated that issue?

9 A I evaluated Mr. Wallace's discussion, yes.

10 Q So that would -- what's one-third of 23?

11 A A little over \$7 billion, if my arithmetic is
12 correct.

13 Q That would leave 16?

14 A Under the two sets of assumptions you asked me to
15 make, yes, sir.

16 Q Now, we've heard some discussion earlier in the
17 case about a license between Intel and Cornell. Did you hear
18 that in Dr. Torng's testimony? I thought you were sitting in
19 the courtroom.

20 A I don't remember that. I missed a couple of small
21 parts of his testimony, so I apologize. I'm not suggesting
22 that you characterize it wrong at all, but I don't remember
23 that.

24 Q I see. You're aware of evidence in the record and
25 in what you've reviewed of a license between Cornell and

1 Intel, is that right?

2 A Yes, sir. Although I've seen it characterized in
3 other ways as well.

4 Q Uh-huh. And that's also an issue that ultimately
5 the jury is going to need to decide, just like the IBM
6 license, right?

7 A Yes, sir, I would imagine so.

8 Q Just like whether or not the '115 patent drives
9 performance, that's an issue for them too, right?

10 A The issue of whether the patent drives performance
11 to sufficient extent to affect sales, for example, servers
12 and workstations, yes, I would agree with that.

13 Q All right. And it's true that about another third
14 of the chips that are accused of infringing, HP gets from
15 Intel, is that right?

16 A My condition would be the same, simply that I think
17 a fair reading of Mr. Wallace's discussion is that there is
18 considerable uncertainty about the exact magnitude of
19 service.

20 Q Would you assume for me that the number of chips
21 that HP purchases from Intel is on the order of a third?
22 That would reduce the number one-third still, right?

23 A Yes, sir.

24 Q That would get us to 9?

25 A Yes, sir.

1 Q And so, if we go to here, back to page 1, that
2 would bring the 23 base down to 9. What would it reduce that
3 575 number to, sir?

4 A Two and a half percent of roughly \$9 billion.

5 Q We've already established that my math is horrible.
6 Can you help me?

7 A Let's see. Well, let's make it an even a third, a
8 third and a third, so a third of 575, a third of 600 would be
9 200 million, so it's a little less than 200 million.

10 Q Let's just put approximately 200. I'm not sure
11 that's quite right.

12 Now, let me go to another issue on this royalty
13 base, and that would be, let me look at your slide, it's I
14 think slide -- revised slide 25. Right. So, in determining
15 this royalty base, the very first question that you need to
16 ask and answer is did the patented invention contribute to
17 customer demand. That's your first question, right?

18 A Well, no, sir, actually, it was the second of two.
19 The first, there was another slide before this, you may
20 remember, that addressed the issue of how HP sells, makes its
21 sales. I made the point that there are two issues; how did
22 HP make its sales, service and workstations versus something
23 else, and did the patented invention contribute substantially
24 to customer demand.

25 Q Okay. They're independent questions?

1 A Yes, I guess so.

2 Q Yeah, they are. And so let's look at this question
3 and let's first look at what part of the products at issue
4 are covered by the patented invention. So let's go to
5 DDX-44. Let's take servers as an example. Before today in
6 your prior testimony and expert reports, your testimony was
7 that the -- stop that, go back. Your testimony was that the
8 servers were the appropriate base for the revenue, is that
9 right?

10 A Yes, sir.

11 Q That's not your testimony here today at all, right?

12 A The calculation that I made today was on a royalty
13 base based on CPUs.

14 Q So it wasn't based on the server. Go to the next
15 thing. We're going to move past the cell board. Stop there.

16 Now, is the base that you're testifying to now
17 based upon that brick that we're looking at?

18 A I think, although of course you're way outside my
19 area of expertise. That looks like what I've seen described
20 as the CPU before, so if I'm correct, the answer is yes.

21 Q Well, are you sure that this number is based upon
22 that brick or is it based upon something else?

23 A Mr. Wallace's tabulation, as he describes it, is
24 based on the CPU, which I have heard described in the
25 terminology of a brick. So assuming that the CPU is what

1 you've schematically pulled out of that picture, then we're
2 talking about the same thing.

3 Q So we're trying to find -- but the patent, the
4 patent doesn't cover the brick, does it? The patent isn't on
5 a brick?

6 A Well, I guess those are two different questions. I
7 think that's right, keeping in mind again I don't have any
8 expertise in determining patents, the patent is not on the
9 brick. Whether it covers the brick or not, that seems to me
10 a patent infringement issue.

11 Q Well, the patent is on circuitry that's accused, do
12 you understand that?

13 A Well, I'm not sure that that's even exactly the
14 right description. But again, I say that simply because I
15 don't have the expertise of interpreting a patent claim. The
16 way I've heard the patent described I guess might even be
17 slightly different from that.

18 Q Okay. Well, let me ask you this. Do you know
19 whether or not the circuitry -- what is accused of infringing
20 is circuitry that's on an IRB? Have you heard the word IRB
21 before?

22 A I have.

23 Q And do you know whether or not the circuitry that
24 Cornell says is covered by the patent is circuitry on the
25 IRB?

1 A As long as you mean by covered by the patent not to
2 suggest that other things might be covered by the patent in
3 the sense of infringing the patent, then yes, I have heard
4 the description of the IRB and the circuitry on the IRB, so
5 to that extent I think we can agree.

6 Q Let's look inside the brick. We seem to be having
7 some technical difficulties, Your Honor. Just let it run and
8 I'll tell you when to stop. Can you stop it right there?
9 Okay, so you understand that in the PA-8000, in that family
10 of chips are the accused processors?

11 A Yes.

12 Q And so now let's look inside that. And you
13 understand that the IRB is a portion of the processor?

14 A Yes, sir.

15 Q And now run it to the end. Just let it run
16 through.

17 Now, you mentioned Mr. Osterndorf briefly on your
18 direct examination, and you said his approach was to look at
19 the royalty amount based upon a percentage of real estate, I
20 think you said, on the chip, is that right?

21 A I don't think I used the word real estate, but I
22 probably said the proportion of space or something like that.
23 If I remember correctly, that's essentially what
24 Mr. Osterndorf is suggesting.

25 Q Right. And do you know Mr. Osterndorf worked at

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1 IBM licensing their patents?

2 A Yes, sir, I understand that.

3 Q And you know that at IBM this percentage of real
4 estate of the chip approach was commonly used?

5 A I know he said that, yes, sir.

6 Q And, in fact, in the licenses that you looked at in
7 the royalty -- what do you call that thing, the royalty
8 database?

9 A RoyaltySource.

10 Q Royalty what?

11 A RoyaltySource database.

12 Q In fact, two of the licenses that you looked at but
13 rejected in the royalty database used this percentage of real
14 estate approach, right?

15 A Well, not completely. First, just to correct what
16 might be a misunderstanding, the rejection was only after
17 Mr. Osterndorf suggested it might be inappropriate to include
18 that agreement. So you may remember we looked at the first
19 set of tabulations, 35 or so, and then 23. In the final run
20 no change in the median royalty rate, that change was made at
21 Mr. Osterndorf's suggestion, so just so we understand what
22 rejection means in the context. And as to the agreements
23 that did use space in that sense, yes, as I think I said when
24 I was talking a few minutes ago, they did so. They appeared
25 to be primarily development agreements. Upon reflection it

1 made sense they therefore shouldn't be included since they
2 appeared to be primarily development agreements.

3 Q And the IBM agreement with Cornell was an agreement
4 for Cornell and Dr. Torng to develop some research for IBM,
5 right?

6 A I guess that's a fair characterization. I think
7 it's just -- isn't it just called a research agreement? I
8 don't know. I don't think you're doing injustice to what was
9 going on with that agreement.

10 Q Okay. Let's switch to a slightly different topic,
11 Dr. Stewart. And so if we go back to your revised slide 25,
12 the question here is did the patented invention contribute to
13 customer demand. And so the question is then whether or not
14 the function provided by the circuitry covered by the patent
15 contributes to customer demand. That's really the question
16 that, bottom line, you need to look at in order to determine
17 the appropriate royalty base?

18 A The only small change I would make in order to
19 completely agree with that is that I would use terminology
20 like just the patented invention and what the patented
21 invention makes possible, so that we are just focused on
22 what, yes, I would agree is these two steps plus the third
23 that I talked about Dr. Smith's opinion, that it's the
24 patented invention. Which I understand that you're simply
25 wanting to describe it, but to avoid any misunderstanding, I

1 would just call it the patented invention.

2 Q Okay. So let's take a look at that for a second,
3 at what contributes to customer demand. And so we'll put at
4 the top the Torng patent. Not that I agree with that, but I
5 understand that's your opinion, and so we'll start there.
6 Okay? You've expressed an opinion on that, right?

7 A I have, but keep in mind that I am relying on
8 documents and Dr. Smith's testimony, not that I regard myself
9 as having the ability to offer, say, a computer scientist's
10 opinion on this issue.

11 Q Right. Ultimately that issue is an issue for a
12 jury to decide, and Dr. Smith is the prime candidate for the
13 source of evidence from Cornell on that subject, right?

14 A Well, his opinion on that issue certainly deserves
15 a lot more weight than mine, I agree with that.

16 Q Okay. And the point I think that you made on
17 direct is that that in Dr. Smith's opinion leads to a
18 performance advantage, which in turn leads to that customer
19 demand that we're talking about, is that right?

20 A That's a little bit of a shortcut, but as long as I
21 just qualify my agreement by saying it's a little bit of a
22 shortcut, yes.

23 Q Okay. Now, the evidence has been that there are a
24 large number of factors other than this out-of-order
25 execution that leads to the performance of HP processors, is

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1 that right?

2 A Yes.

3 Q Let's have Exhibit DDX-73. Were you here during
4 the testimony of Mr. Noller?

5 A Yes, sir.

6 Q And he was talking about speculative execution as
7 being another factor in addition to the out-of-order
8 execution, is that right?

9 A Yes, I see where he said that.

10 Q I mean, there is some evidence in the record on
11 intelligent execution, but intelligent execution isn't
12 out-of-order execution. Intelligent execution has additional
13 components to it, doesn't it?

14 A Again, you're outside any area I have expertise in,
15 but that's the way I remember the discussion.

16 Q Dynamic branching and speculative execution. Let's
17 go to DDX-74. Branch prediction is another factor that leads
18 to performance, is that right, sir?

19 A Actually, I don't remember. I remember Mr. Noller
20 talking about branch prediction, I don't remember whether he
21 was saying that in itself was a performance enhancer or not.

22 Q Let's go to DDX-70. Were you here during
23 Mr. Wheeler's testimony?

24 A Yes, sir, I was.

25 Q And you've done some work in the semiconductor

1 field. Being able to go to a half micron technology is a big
2 deal in terms of performance in semiconductors, isn't it?

3 A I don't have any ability of my own to answer that.
4 Again, it's one of those issues that was discussed. I
5 certainly wouldn't disagree with that.

6 Q And I think we've heard from a number of witnesses
7 that the four-way superscalar factor was a significant factor
8 in the PA-8000's increase in speed?

9 A We have, but if my memory is correct, there are
10 also documents that suggest that four-way superscalar
11 wouldn't be possible without out-of-order process, so I'm not
12 sure the extent to which it's fair to characterize that as an
13 independent factor.

14 Q Let's go to DDX-72. The runway bus is another
15 factor that's been testified to in terms of the increased
16 performance, is that right?

17 A Yes, sir.

18 Q Now, you are not in a position to evaluate which,
19 if any, of these plays the predominant role in the speed of
20 the PA-8000 chips, is that right?

21 A Certainly not because of any technical expertise, I
22 will agree with that.

23 Q Right. And that largely falls to Dr. Smith, right?

24 A Well, certainly in terms of the technical
25 expertise. The only points that I have made in this regard

1 are the ones that I could gain from looking, analyzing,
2 looking at analyzing the HP documents.

3 Q Okay. So let's go to -- but you were here for all
4 of his testimony, right, Dr. Smith's, every minute of it?

5 A I believe so, yes.

6 Q Let's go to Z-0078. This is one of the exhibits he
7 used on direct and I used on cross, where I believe his
8 testimony was relating the performance of the 8000 processor
9 to out-of-order execution. Do you see that?

10 A Yes, sir.

11 Q Do you remember him ever opining on any of these
12 other factors as to whether or not they played a role in the
13 performance advantage of the PA-8000?

14 A Well, yes, sir. Unless I misunderstand your
15 question, the whole focus of that discussion, Dr. Smith's
16 testimony, as I understand it anyway, and the documents that
17 he even talked about, was doing just that, isolates the
18 impact of out-of-order execution, holding all of the other
19 things equal.

20 Computer scientists have an advantage over
21 economists when they want to do their case studies, they
22 really can do a computer simulation in which they're holding
23 everything else equal. And again, I don't have the technical
24 expertise to interpret those studies, but I came away with
25 the clear impression that both Dr. Smith's analysis and the

1 numerous studies that he referred to were doing just that,
2 focusing on the impact of out-of-order and holding all of
3 these other things constant to the extent the analysis could
4 be done.

5 Q So you were comfortable with the level of depth of
6 his analysis?

7 A Comfortable in what sense?

8 Q It satisfied you?

9 A Well, as I've said, I don't have the technical
10 expertise to criticize these studies at all. I look at them
11 through an economist's eyes. If a graduate student were
12 doing a study and wanted to hold other things equal, what
13 would I want them to do, and the answer is I would want them
14 to focus only on something they were looking at and hold
15 everything else equal. And I interpreted those studies as
16 doing exactly the same thing, and therefore asking the
17 relevant question.

18 Q I see. Now, I wrote down there the HP patents that
19 I talked to Dr. Smith about yesterday in terms of whether or
20 not he had considered them in connection with his performance
21 comparison. Are you just as comfortable with his level of
22 analysis with respect to those?

23 A Once again, I don't know how to interpret the
24 question of am I comfortable with them. I don't have any
25 technical expertise to evaluate the role, if any, that those

1 patents play. I simply focus on the, for example, what's
2 graphed here, which is a performance comparison. The
3 economic jargon would be you hold everything else equal and
4 focus on what happens, say, if you take the price of gasoline
5 to take an unfortunate current example, in this case hold
6 everything else equal, focus on what happens when you have
7 out-of-order execution.

8 Q Let's move on to a different topic. Let me have I
9 think it's called revised Stewart slide 49, or maybe it's
10 just Stewart slide 49. This is a chart that we saw a few
11 moments ago, right?

12 A Yes, sir.

13 Q And this shows a few things. One thing it shows is
14 the introduction of is it units of the PA-8000?

15 A These are revenue dollars.

16 Q So dollars associated with the introduction of
17 units of the PA-8000?

18 A Well, let me say exactly what it is, and I'm sure
19 we're in agreement, I just want to make sure there is not any
20 misunderstanding. What is graphed here are the sales revenue
21 from servers and workstations incorporating these particular
22 processors.

23 Q I see. And was this intended to try to -- and the
24 yellow chart is the decrease in revenue of the PA-7000?

25 A Well, to be slightly more precise, it's the actual

1 revenue in each year. It does, as you say, show a decrease
2 from year to year.

3 Q And then the red one on the bottom is the Itanium?

4 A Yes, sir.

5 Q And I think you mentioned this on direct, I just
6 want to make absolutely sure. In reality that red line is
7 way off to the right, isn't it?

8 A Starting in 2001, that's correct.

9 Q That red line isn't reality, you moved it to the
10 left to make a point?

11 A It's our case study, if you want to use the jargon
12 I was using when I talked about it.

13 Q And so, in fact, what happened is that HP
14 introduced the Itanium when, sir?

15 A 2001, if my memory is right.

16 Q That would be here?

17 A Yes, sir.

18 Q And so then in reality, the bottom of this red line
19 should be moved over to 2001, if we wanted to look at
20 reality?

21 A Sure. And if we want to, we can look at the graph
22 that shows us that.

23 Q I want to focus on a different point right now.
24 Was the purpose of this chart to show somehow that the speed
25 or performance of the PA-8000 processor drove this?

1 A Well, I didn't -- I guess that wouldn't be the way
2 I would characterize my thinking when I started to think
3 about what this graph shows.

4 Q But in terms of your testimony here today, the way
5 I heard it, is you were saying, well, this chart somehow
6 supported the notion that because the PA-8000 had this speed
7 and the PA-7000 didn't, it dramatically outsold the PA-7000?

8 A Well, again, that's a shorthand I think for what I
9 said, but what's different between the PA-7000 and the
10 PA-8000 is to a very considerable extent, I believe it's fair
11 to say, limited to the processor. And, in fact, Dr. Smith's
12 benchmarks focused on that in some cases because I don't
13 remember exactly what the products were, I think it might
14 have been a PA-7200 and a PA 80-something hundred, and they
15 had the same clock speed and they had the same amount of
16 cache and so on, so he was focusing on the difference in
17 speed. Am I not answering your question, Mr. Allcock?

18 Q That's fine. In fact, the thing that happened is
19 HP decided to discontinue the 7000 and replace it with the
20 8000. And so if you look at total sales of HP products,
21 there is really no difference in terms of their market
22 performance, except for a slight gradual increase that one
23 would expect otherwise?

24 A Well, actually, I wouldn't agree with that for two
25 reasons. First, I don't believe that's a completely fair

1 characterization of the documents to say that HP decided to
2 discontinue the 7000 series.

3 Q That's fair enough. Can we show the revised 48A?
4 In fact, if one were to average out those sales, what you'd
5 see is a gradual increase of processor sales over time, not
6 any spike shown by increased performance, but it was just a
7 gradual increase of sales of processors. Would you agree
8 with that, sir?

9 A No. That must be your chart, Mr. Allcock.

10 Q It is.

11 A Forgive me, that average doesn't make any sense. A
12 number that would make sense would be if you plotted the sum
13 of the two, the sum of everything, because the point that
14 you're suggesting is that the total sales grew only
15 gradually, but we can see that that's not quite right. I'm
16 sorry, I didn't do that graph, but we can do it with our eyes
17 to some extent.

18 We see that the sales in 1996 were the yellow line
19 plus the blue lines about sort of a quarter of a way up, so
20 it starts out about there. And you have to do the same with
21 your mind in '97 and '98, this sum of the blue line, which is
22 \$3 billion, roughly, in '97, and a little over one, so it's a
23 little over 4 billion. But then if we look at 2000, we do
24 see that there is a pretty substantial increase because by
25 then the yellow line is essentially down to zero.

1 So, I guess I'd agree with you to some extent there
2 is an increase, it's not as smooth as -- I'm not really sure
3 at all what you've done with that green line, but if you
4 plotted the total of the two, you would see that it would be
5 a more gradual increase, but an increase nonetheless. And I
6 don't know what you possibly could be getting with that green
7 line out after 2003 because there is no Itanium sales to
8 include there. So I apologize, I just don't know what you're
9 doing.

10 Q It's a rough approximation quickly done.

11 A All right, I'll give you that, Mr. Allcock.

12 Q So, let's talk a little bit about the RoyaltySource
13 agreement or documents. Many of those RoyaltySource
14 documents that you relied on are not patent licenses, is that
15 correct?

16 A I don't think I'd agree with using many to
17 characterize them. Not all of them are patent licenses, I
18 would agree with that.

19 Q So, what you're trying to do here is to determine
20 the appropriate license rate between Cornell and HP on a
21 single patent on a non-exclusive license for the term of the
22 patent, is that right?

23 A Yes, unless I misunderstood you. Let me say it
24 back to make sure I didn't misunderstand you. That what
25 would have been negotiated in the hypothetical negotiation is

1 a non-exclusive license, that is other people would be
2 licensed in addition to HP, it would have started at the time
3 of the first alleged infringement, which is roughly
4 August 1996, and it would have run through the patent life.
5 So if that's what you said, we're in complete accord.

6 Q And some of the agreements in your royalty base are
7 not patent licenses at all, right?

8 A By royalty base, you mean in the RoyaltySource
9 database?

10 Q The RoyaltySource database.

11 A You know, I'm not absolutely certain when we look
12 at the ones that ultimately I relied on in the last chart, it
13 was certainly the case there were at least one or two in the
14 initial chart that were licenses of technology, of course,
15 but were not licenses of patents.

16 Q And you mentioned earlier that cross licenses, that
17 is patents, licenses between parties, for multiple patents on
18 either side are not material. You excluded many of the HP
19 licenses on that basis, right?

20 A Well, it's not that they're not material, it's that
21 if there is no royalty rate actually associated with a
22 license, then there is no information content in that license
23 that helps us here.

24 Q And some of the licenses in the royalty base that
25 you considered were cross licenses, right?

Marion B. Stewart - Cross

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1 A In the RoyaltySource database? I'm not sure. If
2 you're suggesting that there are one or two, I'd be glad to
3 look and see if I agree with you. I'm not sure from memory I
4 would agree with you.

5 Q And some of the ones at least that were in there
6 originally used this very same approach that Mr. Osterndorf
7 is using on percentage of real estate, is that right, sir?

8 A I wouldn't characterize it as exactly the same
9 approach, because he was talking specifically about a die
10 area, but I would agree that there are two of those
11 development agreements, primarily development agreements that
12 referred to real estate in some sense.

13 Q Right. Let's look at D-78, it's tab 21 of your
14 report. I think this is one, and you can correct me if I'm
15 wrong -- I'm sorry, D-478. This is one of the RoyaltySource
16 agreements between Fujitsu Computer and Ross Technology. Do
17 you see that?

18 A Not yet, I apologize. What was the actual
19 production number?

20 Q HP 345305, tab 21 in your report, trial Exhibit
21 D-478.

22 A I got it, thanks.

23 Q And if you look down in compensation detail, it
24 talks about the approach, and the approach is multiplying a
25 rate times the percentage of the internal die area occupied

1 by the Ross, that's the patent holder, processor core. Do
2 you see that?

3 A Yes, sir.

4 Q And so what that would do would be you would take
5 the percentage and royalty and reduce it by the percentage of
6 real estate that the accused circuitry occupies, is that
7 right?

8 A It seems like something like that is what we'd be
9 doing, yes, sir.

10 Q And you're not an expert in semiconductor
11 licensing, are you?

12 A Well, I regard my primary area of expertise as
13 economics, intellectual property economics. In particular,
14 I've helped with a number of licensing agreements, but I
15 don't particularly consider myself an expert in that, above
16 all things.

17 Q Right. You've never worked as a licensing
18 professional, someone whose business is to license patents?

19 A That's never been my primary business, that's
20 correct.

21 Q And so if someone were to say, who worked in that
22 business, that this is the standard way one approaches these
23 things, they'd know more than you on that, right?

24 A Well, they might know more if they said that's the
25 way that I, meaning that person, approach these things. I

1 think my response would be, let's look at these 35 abstracts,
2 two of them are based on some sort of area concept that
3 appears not to be the way that it is usually done, and I
4 would possibly also point out that where it is done, based on
5 this and the other example, appear to be development
6 agreements to develop what is focused on the real estate, to
7 use your term.

8 Q Right. Sure. Some of the other royalty agreements
9 in your RoyaltySource abstract, like, for example, the one
10 that was licensing a hearing aid, isn't that one that you
11 considered?

12 A No. I remember your colleague being confused by
13 that during my deposition. It turned out there were two
14 different sections to that RoyaltySource abstract, and yes,
15 they were all semiconductors. I guess hearing aids are just
16 little computers too these days, but the one that was
17 included here we finally determined was not the part that was
18 related to hearing aids.

19 Q I see. Let me see D-484. This is tab 27 of your
20 abstract. And it talks about an agreement between Rohm and
21 Gatefield. And if we could zoom in on the compensation
22 detail part, it also talks about percentage of revenue based
23 on the area ratio of the technology, which is the patented
24 technology in that case, is that right, sir?

25 A Yes, sir, in addition to.

1 Q Now, the -- who would have been in the room in this
2 hypothetical negotiation on the Cornell side?

3 A A hypothetical negotiator. I don't think there is
4 anything in the hypothetical negotiation framework that tells
5 us more than that. In August of '96 or thereabouts Cornell
6 owned the patent, so the hypothetical negotiator would have
7 been a representative of Cornell. I have generally gone,
8 taken the step that in the hypothetical negotiation we
9 presume they're rational negotiators, that is they're
10 motivated by rational things, not that I might not license
11 you because I don't like your tie. Not that I'm suggesting
12 that I don't like your tie.

13 Q And so but you said Cornell. I think the actual
14 patent holder at that time was Cornell Research Foundation,
15 right?

16 A If so, then I suppose that might be a finer point
17 on it.

18 Q Well, do you know?

19 A I think that's right. But again, just because I
20 don't have a photographic memory, I wouldn't want to say I'm
21 absolutely certain of that.

22 Q Did you consider the Cornell Research Foundation
23 licenses?

24 A I need a little more context from you, Mr. Allcock,
25 I'm sorry.

Marion B. Stewart - Cross

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1 Q Well, they're the plaintiff, they're the ones that
2 were in the room or would have been in the hypothetical
3 negotiation. Don't they have a licensing program? That's
4 what they do, right?

5 A Fair enough. And yes, thank you, now I think I can
6 answer your question, and yes, there is one of the so-called
7 Georgia Pacific factors that you remember that addresses
8 particularly this issue, is the licensor going to be
9 reluctant to license --

10 Q No, that's not my question.

11 A Well, that's certainly a relevant issue. I
12 believe -- forgive me if I misinterpreted it, but you asked
13 me if I considered the licenses by Cornell Research
14 Foundation, and the answer is yes, and I just explained the
15 way in which I did.

16 Q I see. Did you actually look at the licenses that
17 they granted on the patents they owned?

18 A On other patents?

19 Q Correct.

20 A I don't recall doing that. I guess I couldn't tell
21 you with absolute certainty that I ever saw them.

22 Q I see. Did you look at the total revenue that they
23 had for licensing on an annual basis?

24 A I just don't remember, I apologize.

25 Q It wasn't important to you?

Marion B. Stewart - Cross

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1 A Well, if one were going to rank order of important
2 factors, I guess my reaction would be not very for many
3 important reason. If there had been information that was not
4 just a licensing program for completely different patents,
5 which is what I think you just asked me about, but were
6 something more directly relevant, then you would get closer
7 to, you would move up in the rank order of importance. I'm
8 reluctant to say that nothing -- that anything is completely
9 unimportant, but it seems to me to be a tangential issue.

10 Q So, in addition to these factors that we talked
11 about here that relate to performance, are there other
12 factors related to issues other than the processor that drove
13 the sales of processors?

14 A Processors don't get sold, so did you mean to say
15 the sales of servers and workstations?

16 Q For example, HP's brand name, that drove the sales
17 up a lot, didn't it?

18 A I would certainly agree that would likely be
19 important in affecting sales, yes.

20 Q HP's service, that drove sales?

21 A Affected sales, yes, I certainly agree with that as
22 well.

23 Q The reliability of the machine sold, that affected
24 sales?

25 A Yes.

Marion B. Stewart - Cross

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1 Q All of that's unrelated to the Torng patent, is
2 that right?

3 A Yes.

4 MR. ALLCOCK: I have no further questions of
5 the witness, Your Honor.

6 THE COURT: Thank you, Mr. Allcock.
7 Mr. Anderson, would you care to inquire?

8 MR. ANDERSON: Yes, Your Honor.

9 *REDIRECT EXAMINATION BY MR. ANDERSON:*

10 Q Could we please pull up slide 4. Now, Dr. Stewart,
11 is this one of the documents that you considered in forming
12 your opinions and understanding the relationship between
13 intelligent execution and out-of-order execution?

14 A Yes, sir.

15 Q And if we can turn to slide 20. You were asked a
16 question -- I'm sorry, let me get to the one I actually want.
17 If you'll turn to 33, please. You were also asked a question
18 about four-way superscalar, and I think you responded to
19 Mr. Allcock on that issue. Is this the document you had in
20 mind in response?

21 A Yes, sir. This Q and A document that says, our
22 experience indicates that it's not possible for a RISC
23 processor to sustain four-way superscalar operation without
24 this feature, referring to out-of-order execution.

25 Q Now, if we could go to slide 47. Mr. Allcock asked

Marion B. Stewart - Redirect

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1 you questions about this slide that you had adjusted in order
2 to do your case study. Is this the actual information that
3 you utilized in your report analyses?

4 A Yes.

5 Q Does the fact that the Torng patent expired in 2006
6 impact your calculation of the reasonable royalty over the
7 duration of the period of alleged infringement?

8 A The only impact is the fact that I've stopped my
9 damages calculation in February of 2006 when the patent
10 expired. At the time of the hypothetical negotiation, of
11 course the patent is enforced, is assumed to be infringed for
12 my purposes, and it's enforced during that entire period
13 here, and in fact a little bit longer, through February of
14 2006. So that the impact is I have calculated damages only
15 up until the patent expires.

16 Q If we could turn to Exhibit P-440 and go to 52,
17 this is the design sign-off agreement, or design sign-off
18 that we've been looking at, and turn to 52480. This is the
19 document that we looked at previously discussing out-of-order
20 execution is a competitive requirement. We haven't looked at
21 another aspect of the document, and I would like to turn now
22 to 52534. If you'll look at the final two assumptions,
23 Dr. Stewart?

24 A Yes, sir.

25 Q How do those assumptions affect your views in doing

1 your comparison between the PA-7000 and PA-8000 system that
2 we've seen in that graph previously?

3 A These two bullet points I think are making the
4 point that I summarized a few minutes ago, that the
5 difference, the primary difference between the PA-7000 series
6 servers and workstations and the PA-8000 series servers and
7 workstations is the processor, and the performance made
8 possible by that processor. The other things for the most
9 part it appears from this document are being held constant,
10 they're staying the same.

11 Q Now, in the hypothetical negotiation where you have
12 the two parties, willing licensor and willing licensee, and
13 the patent is just about to be infringed or just being
14 infringed, is there an underlying assumption that you make on
15 the outcome that would occur if, in fact, they couldn't reach
16 agreement of the license, although they knew the patent was
17 infringed, valid and enforceable?

18 A Well, the only possible alternative is to turn to
19 something that doesn't infringe, and that's where we had the
20 discussion I guess yesterday as well as this morning about
21 non-infringing alternatives, and the worth of a patent
22 license hinges directly on the extent to which a
23 non-infringing alternative is or is not acceptable.

24 Dr. Smith offered the opinion yesterday that on
25 technical grounds neither the PA-7000 nor the Itanium were

1 acceptable non-infringing alternatives, although they're not
2 accused of infringement so they are non-infringing
3 alternatives. I talked earlier today about my perspective as
4 an economist and how the relative sales history allows us to
5 conclude, make a conclusion in that regard, and I concluded
6 that from an economic perspective neither the PA-7000 nor the
7 Itanium based servers and workstations would have been
8 acceptable non-infringing alternatives.

9 So at the hypothetical negotiation, the
10 hypothetical negotiators for HP would have been in a position
11 of having to choose to take a license on reasonable terms at
12 a reasonable royalty or do without the performance advantages
13 of the PA-8000 processor, and I've offered my opinion as to
14 what the impact of that would have been.

15 Q Mr. Allcock also discussed HP experts' opinion
16 related to the royalty portion selling price. And in your
17 opinion, is it your understanding that the royalty portion
18 selling price merely looks at the die area or does it look at
19 cost of manufacture?

20 A Well, you may be asking me to remember more details
21 of Mr. Osterndorf's calculation than I can. A portion of the
22 calculation, however, is explicitly related to the die area,
23 the ratio, the portion of the processor taken up by the die,
24 the little piece that includes the circuitry that HP contends
25 should be used as an appropriate measure of the invention

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1 here.

2 Q I want you to assume that Mr. Osterndorf's opinion
3 is connected to the cost comparison of manufacturing that
4 20 percent compared to the remainder of the processor,
5 remainder of the brick, et cetera.

6 A Thank you for refreshing my recollection.

7 Q In your opinion, would looking to the cost of
8 manufacturing, comparative cost of manufacture of that
9 portion of circuitry, compared to other portions of
10 circuitry, whether that's memory or interconnect or other
11 portions of the product, whether it's steel or bottles, makes
12 sense?

13 A No, sir. There is certainly no economic basis for
14 including the devalue of any sort of intellectual property
15 would be tied to its cost and certainly not to its cost
16 relative to some other costs of other items.

17 MR. ANDERSON: Your Honor, before I inquire on
18 one subject, I would like to talk to --

19 THE COURT: We're close to lunch time. Should
20 we take our lunch?

21 MR. ANDERSON: I think it will be just a
22 question or two.

23 THE COURT: Let's just have a sidebar, shall
24 we?

25 **(Sidebar discussion held off the record.)**

Marion B. Stewart - Redirect

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1 Q If I can have P-37. That's 76, page 76 and page
2 77. Let's just pull up that highlighted portion.

3 Now, Dr. Stewart, were you aware that the Court had
4 entered an order in this matter -- you were asked some
5 questions about an IBM license. The Court had entered an
6 order in this matter that reads, the Court hereby makes the
7 following findings, which shall be binding and preclusive
8 upon the parties during the trial of this action, subject to
9 the approval of the assigned trial judge. It is established
10 that despite a thorough search, neither Cornell Research
11 Foundation, Cornell University, Hewlett-Packard Company, nor
12 IBM has been able to locate a document specifically
13 denominated as a license agreement between CRF, or anyone
14 else legally authorized to confer such rights, and IBM, under
15 the '115 patent. Were you aware of the existence of that
16 order?

17 A Yes, sir.

18 MR. ANDERSON: No further questions.

19 THE COURT: Mr. Allcock?

20 *RECROSS-EXAMINATION BY MR. ALLCOCK:*

21 Q Can I have Exhibit 34, page 4 at the bottom? Was
22 this one of the documents you considered, sir?

23 A I was aware of this document as well, yes, sir.

24 MR. ALLCOCK: No further questions, Your
25 Honor.

1 THE COURT: Thank you.

2 MR. ANDERSON: No further questions for
3 Dr. Stewart.

4 THE COURT: For Dr. Stewart at least for the
5 time being.

6 MR. ANDERSON: For the time being.

7 THE COURT: Dr. Stewart, you may step down.
8 Where do we stand at this point in presentation of your case,
9 Mr. Poplawski?

10 MR. POPLAWSKI: May I confer for ten seconds
11 with Mr. Anderson?

12 THE COURT: You certainly can.

13 MR. ANDERSON: Your Honor, we have a short
14 video to play by Mr. Johnson who was introduced in the
15 openings, followed by three short presentations from Cornell
16 witnesses on the interactions between Cornell and
17 Hewlett-Packard at that time after filing the suit. And then
18 we have short expert testimony presentations on licensing and
19 marketing.

20 THE COURT: And your cumulative total you
21 expect to take is how long?

22 MR. ANDERSON: The clip is 30 minutes. I
23 think between the three Cornell witnesses, we should be able
24 to finish in a little over an hour, and I hope to be able to
25 finish the two experts in an hour.

1 THE COURT: So you are looking at about two
2 more hours?

3 MR. ANDERSON: Two and a half.

4 THE COURT: To present your full case?

5 MR. ANDERSON: Correct.

6 THE COURT: We can encourage you to streamline
7 that a little bit and you can think about it while we have
8 our lunch. Take an hour.

9 THE CLERK: Court stands in recess until 1:05.

10 (Recess at 12:05, jury excused.)

11 MR. ALLCOCK: Just on schedule, Your Honor.
12 With cross, by my addition, that will probably take us pretty
13 close to the end of the day. I hate to start our case on a
14 Friday at 4:15. I know the Court doesn't want to, you know,
15 waste time, and I don't either, believe me, but I just ask
16 the Court's direction.

17 THE COURT: If it's 4:15, we'll start. If
18 it's 4:45, we may not. And I'm going to be a little
19 attentive to whether I think you're trying to drag it out to
20 delay your case start until next week. I'd like to see
21 Mr. Lesartre today.

22 MR. ALLCOCK: I would too.

23 THE COURT: So maybe you can help us out here,
24 Mr. Anderson, or Mr. Poplawski.

25 MR. ANDERSON: Your Honor, we will endeavor

1 not to cover territory previously covered.

2 THE COURT: We've had a lot of duplicative
3 testimony here. If we could move rather quickly through this
4 remaining material, and we'd all like to hear from
5 Mr. Lesartre later today.

6 MR. ALLCOCK: Your Honor, could Mr. Cunningham
7 address that IBM issue that we just addressed at sidebar?

8 THE COURT: Yes. We've been over this a
9 couple of times. Mr. Cunningham?

10 MR. CUNNINGHAM: It's an entirely different
11 issue. This is not the preclusion order that's come up a
12 couple of times, this was a finding which was made by the
13 magistrate-judge in this case, which was subject to the
14 approval of the assigned trial judge, i.e. Your Honor. It is
15 a finding that there is not a document specifically
16 denominated as a license between IBM and Cornell.

17 THE COURT: Judge Peebles looked into that
18 pretty closely, didn't he?

19 MR. CUNNINGHAM: He did, Your Honor.

20 THE COURT: And he found none.

21 MR. CUNNINGHAM: The fact of the matter is
22 that we believe that there is a document specifically
23 denominated as a license, it's entitled, Sponsored Research
24 Agreement, but it does contain language of an active license,
25 therefore, we think the wording of the finding has the

1 potential to be misleading to the jury, and we would like
2 some consideration of that issue.

3 THE COURT: What consideration do you want?

4 MR. CUNNINGHAM: Well, Your Honor, I would
5 suggest that at a minimum we offer some proposed amendment to
6 that finding that makes clear that while there is not a
7 document entitled, quote, unquote, license, between IBM and
8 Cornell, there is, in fact, a document that contains the
9 language --

10 THE COURT: Have we already seen this
11 agreement that you're talking about? Is that the 1981?

12 MR. ALLCOCK: Yes.

13 MR. CUNNINGHAM: Yes, Your Honor.

14 THE COURT: Then the jury has got it in front
15 of them. You've got your evidence in, they've got their
16 evidence in, and you can each characterize it as you wish
17 when we hit the final argument phase. I don't think we have
18 a problem at this point, do we, Mr. Cunningham? You're
19 worried that the Court has somehow weighed in against one
20 side or the other.

21 MR. CUNNINGHAM: Yes, Your Honor.

22 THE COURT: If I perceive that that's a
23 problem, we'll include it in our jury instructions.

24 MR. CUNNINGHAM: Thank you.

25 MR. ANDERSON: For your consideration, the

1 Magistrate Judge Peebles' decision on that matter was taken
2 up to Judge Mordue on a motion for reconsideration and
3 confirmed in docket 800, I believe.

4 THE COURT: I think Judge Peebles specifically
5 said it's going to be in mine -- I think Judge Peebles
6 specifically said that was going to be my call. I think I
7 just made my call. That if all the evidence that's necessary
8 for the jury to consider is in, if I perceive that there is
9 some prejudice, we'll put it into our instructions. Yes,
10 Mr. Poplawski?

11 MR. POPLAWSKI: One more point. I understand
12 that the Court has permitted HP to use its patents on the
13 issue of damages, but we've already had a couple of questions
14 from the jurors, and my understanding is HP is going to be
15 getting into a patent --

16 THE COURT: You find me a place and I'll give
17 the instruction we talked about.

18 MR. POPLAWSKI: I think a good place would
19 right before Mr. Lesartre starts his testimony.

20 THE COURT: No, I'm not going to. It's part
21 of your case, Mr. Poplawski. Because that's their first
22 witness, I'm not going to be somehow placing limitations on
23 the way they characterize their first witness.

24 MR. POPLAWSKI: So you would want us to make
25 that suggestion in our case in chief?

1 THE COURT: So I think we've got a few more
2 witnesses coming up, I suppose they'll be mentioning at some
3 point Hewlett-Packard's patents?

4 MR. POPLAWSKI: Any witnesses going to mention
5 HP's patent?

6 THE COURT: If not, we'll wait until further
7 into the Hewlett-Packard case. I don't want to start out
8 making some grand statements before they even put their
9 witness on, so we can look for a place. Is Lotz up second?

10 MR. CUNNINGHAM: Not if it happens today, Your
11 Honor.

12 THE COURT: But Lesartre's going over until
13 Tuesday, right?

14 MR. CUNNINGHAM: Most likely.

15 THE COURT: And in which case Lotz is probably
16 second. Maybe when Mr. Lotz is up. Are you going to let me
17 have a sandwich now? Thanks.

18 (Recess at 12:10.)

19 * * *

C E R T I F I C A T I O N

I, EILEEN McDONOUGH, Registered Professional Reporter and Certified Realtime Reporter, DO HEREBY CERTIFY that I attended the foregoing proceedings, took stenographic notes of the same, that the foregoing is a true and correct copy of same and the whole thereof.

EILEEN McDONOUGH, RPR, CRR